FINAL

Planning Justification Report
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
January 8, 2021

(Revised January 28, 2022)

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Summary

Applicant:	Port Colborne Quarries Ltd.
Property Location:	Part Lot 17, 18 and 19, Con 2, and 59R-16702 (formerly Township of Humberstone) City of Port Colborne, Ontario
Total Property Area:	106.3 hectares (262.6 acres)
Total Area to be Licensed:	**80.3** hectares (198.51acres)
Total Area to be Extracted:	71.1 hectares (175.7 acres)
Annual Extraction Volume:	**1,000,000** tonnes
Available Tonnage Reserves:	+/-45,000,000 tonnes

Required Planning Approvals:

- **Ministry of Natural Resources and Forestry** – Aggregate Resources Act Licence *Class A Licence* (Annual Extraction > 20,000 tonnes per year), *Category 2* (Quarry Below Water).
- **Regional Municipality of Niagara Official Plan** –
    - Add to Section 13 the site-specific policies to permit the Pit 3 extension quarry operation.
    - Identify the subject lands on Schedule D4 - *Mineral Resources* as a Licensed Pits and Quarries.
- **City of Port Colborne Official Plan** –
    - To change the designation from Agricultural to Mineral Aggregate Operations
    - Add a Special Policy Area to permit the proposed quarry.
- **Port Colborne Zoning By-Law** - Amendment to the City's Zoning By-Law 6575/30/18 to;
    - Rezone lands from Agriculture to Mineral Aggregate Operation
    - To reduce the minimum setback from a Provincial Highway from 90.0 metres to 30.0 metres

Contact Information

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Financial Impact Assessment:	IBI Group 7th Floor – 55 St Clair Ave. W Toronto, ON M4V 2Y7 (416) 596-1930	Audrey Jacob PLE ajacob@ibigroup.com
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Tree Preservation Plan: Landscape Plan:	IBI Group Suite 101 - 410 Albert St Waterloo, ON N2L 3V3 519-585-2255	Daniella Giovanatto OALA, CSLA ISA CERTIFIED ARBORIST daniella.giovanatto@ibigroup.com

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:

- **Regional Municipality of Niagara Official Plan (2014)**
    - Add to Section 13 the site-specific policies to permit the Pit 3 extension quarry operation.
    - Identify the subject lands on Schedule D4 - *Mineral Resources* as a Licensed Pits and Quarries.
- **City of Port Colborne Official Plan** –
    - To change the designation from Agricultural to Mineral Aggregate Operations
    - Add a Special Policy Area to permit the proposed quarry.
- **Port Colborne Zoning By-Law** - Amendment to the City's Zoning By-Law 6575/30/18 to;
    - Rezone lands from Agriculture to Mineral Aggregate Operation
    - To reduce the minimum setback from a Provincial Highway from 90.0 metres to 30.0 metres
- **Application to the Ministry of Natural** Resources and Forestry - [Integrated Aggregate Operations Section - IAOS], under the Aggregate Resources Act for a Class A - Category 2 Licence (Quarry Below Water).

The subject lands are located in the eastern portion of the City of Port Colborne just outside and to the northeast of the 'Urban Area Boundary', near the intersection of Miller Road and Highway 3, (Main Street). The lands are bound by Second Concession Road to the north, Highway 3 to the south, existing quarry lands owned by PCQ to the west and the rear lot line of homes fronting onto Miller Road to the east, with a small portion of frontage directly onto Miller Road.

The subject site is +/-106.3 hectares (262.7 acres). The legal description of the subject site is:

> Part of Lots 17, 18 and 19, Concession 2,
> (formerly Township of Humberstone)
> and Plan 59R-16702 (former Carl Road)
> City of Port Colborne,
> Regional Municipality of Niagara.

(refer to Figure 1 – Site Location Map).

CLIENT

Port Colborne Quarries Inc.

PROJECT NAME
PORT COLBORNE QUARRY
PIT 3 EXTENSION

IBI GROUP
Suite 101 - 410 Albert Street
Waterloo ON N2L 3V3 Canada
tel 519 585 2255
ibigroup.com

SCALE: N.T.S.	DATE: 2021-01-11
PROJECT MGR: D.R.S.	DRAWN BY: E.T.
CHECKED BY: D.R.S.	APPROVED BY: D.R.S.
PROJECT NO: 115774	

FIGURE NAME
SITE LOCATION MAP

LEGEND
PROPERTY BOUNDARY
PROPERTY BOUNDARY OF EXISTING PITS

FIGURE NO.	REVISION
1	1

SCALE CHECK 1 in

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1.1 Purpose of Report

The purpose of this report is to provide the Ministry of Natural Resources and Forestry (MNRF), the Regional Municipality of Niagara, the City of Port Colborne, the Niagara Peninsula Conservation Authority and other government review agencies with the necessary information to evaluate and approve the required planning applications for the proposed 'Pit 3 Extension'. The report is also intended to provide a summarization of the application to assist the public during the public notification portion of the planning process. The report will also summarize the key supporting documents (refer to Appendices B-Q) which were undertaken collaboratively to ensure all recommendations and conclusions of each of the technical reports took into consideration the other disciplines.

The annual production volume being requested is 1,00,000 tonnes, which is significantly less than the current annual tonnage of the existing Pit 3 quarry operation (Licence 4444) which is permitted to extract up to 1,815,000 tonnes.

Therefore the threshold of all studies undertaken have utilized a maximum production volume of 1,000,000 tonnes as both a minimum and maximum.

A (Zoom) Pre-submission Consultation meeting occurred on April 23, 2020, with the following applicable review agencies invited: Ministry of Natural Resources and Forestry, Ministry of Environment, Conservation and Parks, Ministry of Transportation, Ministry of Agricultural and Rural Affairs, Niagara Peninsula Conservation Authority, Region of Niagara, and the City of Port Colborne. Meeting Minutes are attached hereto as Appendix A.

2 Site Features

The subject lands to encompass the Pit 3 Extension comprises of seven separate land parcels located on both sides of Carl Road, and also includes the former road allowance for Carl Road. These holdings are characterized as primarily being cropland with frontage access onto one of three abutting roads; Second Concession Road, Highway 3 (Main Street) and Miller Road.

The two small parcels fronting onto Highway 3 both include rural residences (< 0.4 hectares each) and are referenced as 1252 and 1326 Main St. and will be excluded from the licensed area. The remaining parcel includes the New Humberstone Speedway being a dirt-track car racing oval with grandstands. The race track lands are L-shaped extending to Miller Road to the east along with frontage on Highway 3 to the south. Refer to Figure 2 – Site Features.

The northern portion of the site is occupied by woodlots that are part of the west and east branches of the Wignell Drain which becomes part of the City of Port Colborne municipal drain system as it generally traverses the subject site in a north to south direction, eventually flowing into Lake Erie. In addition to the above noted buildings, an additional residential dwelling is located just east of the former Carl Road and referenced as 1645 Second Concession Road. Neither the woodlot nor the residence fronting onto Second Concession Road will be included into the licensed area.

Carl Road was an open road allowance, but the road was never constructed to meet municipal road standards but rather only usable by off-road vehicles. PCQ acquired these lands from the City of Port Colborne in 2020 thereby ensuring the overall quarry extraction of the lands to be substantially more efficient in terms of resource access, and minimizing the potential for external land use impacts including noise and dust which could have been created by haul trucks being required to repeatedly crossing the right-of-way at its' current 'at-grade' elevation.

Total lands:

The total area of the lands owned by PCQ east of their existing Pit 3 (Licence 4444) operation are 106.3 hectares (262.7 acres).

PORT COLBORNE QUARRY PIT 3 EXTENSION

LEGEND

- LOT & CONCESSION
- LICENSED BOUNDARY
- LIMIT OF EXTRACTION
- EXISTING POST & WIRE FENCE
- MUNICIPAL DRAIN
- LOCATION OF CROSS-SECTION (SEE FIGURE 7)
- MW17-3D / MW17-3S — MONITORING WELL - EXISTING
- MW F2 — MONITORING WELL - TO BE DRILLED PRIOR TO QUARRYING
- ARCHAEOLOGICAL SURFACE FIND - INDIVIDUAL
- ARCHAEOLOGICAL SURFACE FIND - GROUPING
- 70m BUFFER FROM ARCHAEOLOGICAL FIND SPOTS (SEE ARCH. NOTE 2)
- EXISTING ACCESS
- EXISTING TREE LINE
- EX. HOUSE — EXISTING BUILDING / STRUCTURE - OFF-SITE
- EX. BARN — EXISTING BUILDING / STRUCTURE - ON-SITE
- EXISTING POND
- SURFACE DRAINAGE DIRECTION
- EXISTING ZONING BY-LAW BOUNDARY
- 120m A.R.A. OFFSET
- 182.0 — EXISTING CONTOUR (1m INTERVAL)

CLIENT	Port Colborne Quarries Inc.
PROJECT NAME	PORT COLBORNE QUARRY PIT 3 EXTENSION
IBI GROUP	Suite 101 - 410 Albert Street, Waterloo ON N2L 3V3 Canada, tel 519 585 2255, ibigroup.com
SCALE:	N.T.S.
DATE:	2021-01-11
PROJECT MGR:	D.R.S.
DRAWN BY:	E.T.
CHECKED BY:	D.R.S.
APPROVED BY:	D.R.S.
PROJECT NO:	115774
FIGURE NAME	EXISTING CONDITIONS
FIGURE NO.	2
REVISION	1

SCALE CHECK 1 in 10mm

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Area of Lands to be Licensed:

The total area of lands to be licensed are all the lands owned by Port Colborne Quarries Inc. except not the woodlot (SWD3-2), 1252 and 1326 Main Street, nor 1645 Second Concession Road: 80.34 hectares.

Area of Lands to be Extracted:

Based on the recommendations from the technical studies which include such constraints as natural environment and archaeology, and subject to the prescribed setbacks of the ARA, the total lands for extraction are 71.1 hectares (175.7 acres).

3 Surrounding Land Uses

The subject site is in the eastern portion of the City of Port Colborne and just east of its' urban area. The abutting land uses within 500.0 metres include:

North: Second Concession Road (paved) is to the north. Further north are agricultural lands that are actively cropped. Fronting onto Miller Road north of Second Concession Road are three non-farm residences. Immediately north of Second Concession is a small +/- 2.5 hectare woodlot surrounding a single non-farm residence as well as a larger woodlot along the rear of the Miller Road homes.

East: The rear lot lines of several (6) non-farm rural residences are located to the east. These lots all have frontage on Miller Road (paved) and have a depth of +/-360 metres. In addition, there is an active chicken barn located at the southwest corner of Second Concession Road and Miller Road. East of Miller Road are crop lands and three farms homes and associated farm buildings.

Between the speedway lands and Miller Road are additional agricultural lands and a non-farm dwelling.

South: To the south is Highway 3 (Main Street) fronting onto the south side of Highway 3 are numerous rural land uses including farm land, non-farm rural residences, and light industrial uses (sales/servicing of farming machinery, kennel / pet grooming).

With frontage onto the north side of Killaly Street E., this includes several non-farm residences and a small (+/-5 hectare woodlot).

Along the west frontage side of Weaver Road are numerous non-farm residences, with all the lands on the east side being actively farmed.

West: The existing Port Colborne Quarries Inc. lands are to the west and specifically their active Pit 3 operation (Licence 4444).

Figure 3 provides the zoning for the subject lands as well as the surrounding uses. The following is a description of those zone categories.

Subject Site

- A - Agricultural
- EC - Environmental Conservation

Abutting Lands Owned By PCQ

- MAO Mineral Aggregate Operations

Other Surrounding Lands

- A Agricultural
- AR Agricultural Residential
- APO Agricultural Purposes Only
- EP Environmental Protection

CLIENT

Port Colborne Quarries Inc.

PROJECT NAME
PORT COLBORNE QUARRY
PIT 3 EXTENSION

IBI GROUP
Suite 101 - 410 Albert Street
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SCALE:	DATE:
N.T.S.	2021-01-11
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D.R.S.	E.T.
CHECKED BY:	APPROVED BY:
D.R.S.	D.R.S.
PROJECT NO: 115774	

FIGURE NAME: SURROUNDING USES

FIGURE NO.	REVISION
3	1

SCALE CHECK 1 in 10mm

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4 Aggregate Quality and Quantity

According to the Ontario Geological Survey: Aggregate Resources Inventory Paper (ARIP) No. 117 published in 1985 by the Ministry of Northern Development and Mines, for Niagara Region, the subject lands are identified as a *Selected Bedrock Resource Area, Deposit No. 3a.* They are part of the Onondaga Bedrock Formation and belong to the Edgecliff Member. This stone type is suitable for lower specification crushed stone, although material suitable for concrete and asphalt aggregate may be available at greater depths. Depth of overburden is estimated to be between 0 and 8 metres (25 feet) and consists predominantly of glacio-lacustrine clay. Specific on-site investigations by Golder confirmed that the site has a variable overburden thickness which increases in depth at the north extent. Portions of the southern property have a very shallow depth of overburden being 0.5 – 2.0 metres and upwards to 4.0 metres thick. However, in the northern extent, the overburden thickness increases to as much as 10-12 metres thick.

As noted above, the surface topography is generally level, with an overall relief of 3.0 – 4.0 metres across the entire site, with a gentle sloping to the south. The depth of accessible bedrock underlying the site, which includes both the Williamsville Unit and Falkirk Unit, both which are somewhat variable in thickness, range from 8.0 metres to 16.0 metres thick.

Golder has undertaken reserve estimates of the available bedrock resources and concluded that there is approximately 40 to 50 million tonnes. The quality of the rock is consistent with that historically and currently being extracted by Port Colborne Quarries Inc. at their existing Pit 3 operations abutting and to the west and the rock meets a large range of provincial road building technical specifications.

For further details, refer to Appendix J: Hydrogeological Assessment, Level 1 / 2 Water Resources Study, Golder Associates Inc., dated October 2020, **and updated October 2021**.

5 Soil Classifications

Section 2.1.2 of the Aggregate Resources Act (Report Standards for Category 2 Applications) states: "*the agricultural classification of the proposed site, using the Canada Land Inventory classes*" must be included in this report, and "*for the lands being returned to agriculture, the proposed rehabilitation techniques must be identified*".

An Agricultural Impact Assessment was undertaken by Colville Consulting Inc. dated July 2020 and the following is a summary of the data compiled from that report for the 'extraction area'.

SOIL SYMBOL	SOIL CLASSIFICATION	AREA (HA)	%	AGRICULTURAL CAPABILITY RATING
CGU.R	Chinguacousy-Red	16.14	22.7	2D
CGU.RW	Chinguacousy- Red Washed	15.91	22.4	2
JDD.R	Jeddo-Red	23.39	32.9	3W
FRM.S	Farmington-Very Shallow	2.79	3.9	4R
FKW.S	Franktown-Very Shallow	0.001	.001	4R
ZNM	Not mapped	12.89	18.1	
Total		71.1	100.0	

As shown above, approximately 55.4 ha (78%) of the proposed extraction area is comprised of Class 2 and 3 soils.

For further soils details, refer to Appendix C: Agricultural Impact Assessment, Colville Consulting Inc. dated September 2020**, and updated October 2021.**

6 Planning and Land Use Considerations

In order for aggregate extraction to proceed on the subject lands, the use must conform to the following:

- Provincial Policy Statement (PPS) 2020
- Growth Plan for the Greater Golden Horseshoe (GGH) 2019
- Regional Municipality of Niagara Official Plan (ROP) 2014
- City of Port Colborne Official Plan 2017
- City of Port Colborne Zoning By-Law No **6575/30/18.**

For purposes of completeness, it should be noted that:

a) The subject site is not within the designated area of the Greenbelt Plan,
b) The subject site is not within the designated area of the Niagara Escarpment Plan.
c) *The subject site is not within the* mapped Growth Plan Natural Heritage System (NHS). Although because of the changes that were made from the 2017 and 2019 Growth Plan, some of the Growth Plan NHS policies apply to the Region's existing natural heritage system [the mapped] Growth Plan NHS does not apply until the Region has completed its municipal comprehensive review.

The following section highlights how the application conforms to the applicable Provincial, Regional and City land-use planning documents.

6.1 Provincial Policy Statement 2020

As stated in the Preamble of the Provincial Policy Statement (PPS), it provides policy direction on matters of provincial interest related to land-use planning and development. As a key part of Ontario's policy-led planning system, the PPS sets the policy foundation for regulating the development and use of land and supports the provincial goal to enhance the quality of life for all Ontarians.

The PPS under Part III states that the PPS is more than a set of individual policies and that it is to be read in its entirety and the relevant policies are to be applied to each situation. When more than one policy is relevant, a decision-maker should consider all of the relevant policies to understand how they work together.

Based on this, we have determined that the relevant policies of the PPS, as they apply to the Pit 3 Extension application are:

- 1.7 Long-Term Economic Prosperity
- 2.1 Natural Heritage
- 2.2 Water
- 2.3 Agriculture
- 2.5 Mineral Aggregate Resources
- 2.6 Cultural Heritage
- 3.2 Human-Made Hazards

6.1.1 Long-Term Economic Prosperity

Policy 1.7 states that:

Long-term economic prosperity should be supported by:

a) promoting opportunities for economic development and community investment-readiness;

Response: The development of the Pit 3 Extension will support long-term economic prosperity as confirmed in the Financial Impact Assessment and Economic Benefits Report attached hereto as Appendix H. In summary, the quarry will: a) increase the Regional and City tax revenue by as much as $1.2 million, b) provide aggregate levies to the Region and City by up to $7.0 million, c) to maintain the same number of direct jobs (20) currently employed by PCQ, and another 55 indirect jobs annually, d) have no anticipated impact on any of the Region's or City's capital programs, and once the processing plant is relocated from Pit 1 to Pit 3, PCQ Inc. anticipates that the Pit 1 lands will eventually transition to a mix of light and medium industrial uses. Initial discussions have occurred between PCQ, the Region and City where the Region would take responsibility to retain a 3rd party planning consulting firm to complete an independent and transparent Secondary Plan for these lands, with PCQ financially underwriting the planning process.

d) optimizing the long-term availability and use of land, resources, infrastructure and public service facilities;

Response: The development of the Pit 3 Extension will support the long-term availability of the aggregate resources which will provide a 'close to market' source for the provincial, regional and local aggregate markets. The aggregate reserves have been estimated to total 45 million tonnes, therefore, the minimum life duration for the quarry (based on 1,000,000 tonnes per year) is 25 years, thereby providing long-term access to the resources.

e) encouraging a sense of place, by promoting well-designed built form and cultural planning, and by conserving features that help define character, including built heritage resources and cultural heritage landscapes;

Response: The development of the Pit 3 Extension has encouraged cultural planning as confirmed in the Archaeological Stage 1 and 2 Assessment and Addendum attached hereto as Appendix E i) and E ii) and the Cultural Heritage Screening Report attached hereto as Appendix G. Specifically, through the completion of these reports, significant archaeological and cultural heritage resources have been identified and have either been avoided or recommendations included for 'no-go zone' buffers until the completion of additional archaeological assessments are undertaken.

i) *sustaining and enhancing the viability of the agricultural system through protecting agricultural resources, minimizing land use conflicts, providing opportunities to support local food, and maintaining and improving the agri-food network;*

The response to Policy 1.7 i) has been sub-divided as follows:

a) *sustaining and enhancing the viability of the agricultural system through protecting agricultural resources,*

Response: As highlighted in the PPS Preamble, "*when more than one policy is relevant, a decision-maker should consider all of the relevant policies to understand how they work together*". As referenced within the Agricultural policies of the PPS, and as noted below, Policy 2.3.6.1 states that planning authorities may only permit non-agricultural uses in prime

agricultural areas in specific circumstances including: a) extraction of mineral aggregate resources.

The majority of the Pit 3 Extension lands will not be rehabilitated back to an agricultural use, therefore we reference the Mineral Aggregate Resources policies of the PPS, and as noted below, Policy 2.5.4 provides the very limited circumstances where complete rehabilitation back to agriculture is not required. However, those portions of the site that are outside the limit of extraction where quarrying activities are being excluded, agriculture will continue to be available.

b) minimizing land use conflicts,

Response: As referenced, the Mineral Aggregate Resources policies of the PPS, and as noted below, Policy 2.5.2.2 provides that 'extraction shall be undertaken in a manner which minimized social, economic and environmental impacts. The development of the Pit 3 Extension will minimize land use conflicts as summarized through this Planning Justification Report, and the Land Use Compatibility / Sensitive Land Use Study attached hereto as Appendix K, and the Social Impact Assessment as attached hereto as Appendix N and specifically as highlighted in the individual technical studies related to acoustical (noise), air quality (dust), blasting/vibration, traffic and visual impacts.

c) providing opportunities to support local food, and maintaining and improving the agri-food network

Response: The Pit 3 Extension will continue to be available to provide opportunities to support local food or improve the agri-food network on those portions of the subject site where pre-extraction topsoil/subsoil stripping has yet to occur, and the lands outside the Limit of Extraction (1252 and 1326 Main St.). As confirmed in the Agricultural Impact Assessment, attached hereto as Appendix C, Pit 3 Extension will not negatively impact existing agricultural opportunities within the surrounding community, subject to the incorporation of the report recommendations.

j) promoting energy conservation and providing opportunities for increased energy supply:

Response: The development of the Pit 3 Extension will promote energy conservation by providing a 'close to market' source for the provincial, regional and local aggregate markets, thereby reducing the need to import aggregate that is not 'close to market. As well, the establishment of an entrance/exit directly onto Highway 3 (versus a Miller Road location) will reduce the travel distance of every external truck by 1.4 km per trip, thus resulting in significant energy savings and greenhouse gas reductions over the life of the quarry.

6.1.2 Natural Heritage

Policy 2.1 states that:

2.1.1 Natural features and areas shall be protected for the long term.

Response: The underlying intent of the Pit 3 Extension design is based on avoidance of the natural features and given that premise, the application will protect all the natural features for the long-term as confirmed in the Natural Environment Level 1 / 2 Report (EIS), attached hereto as Appendix L. Furthermore, to confirm that no negative impacts will occur, monitoring related to surface water, groundwater and vegetation within the wetland will be included at critical junctures of the operation.

2.1.2 The diversity and connectivity of natural features in an area, and the long-term ecological function and biodiversity of natural heritage systems, should be maintained, restored or, where possible, improved, recognizing linkages between and among natural heritage features and areas, surface water features and ground water features.

Response: The design and development of the Pit 3 Extension will provide for diversity and connectivity of the natural features and the long-term ecological function and biodiversity of the natural heritage systems will be maintained, restored and where possible, improved, recognizing

linkages between and among natural heritage features and areas, surface water features and groundwater features as confirmed in the Natural Environment Level 1 and 2 Report (EIS), attached hereto as Appendix L.

In summary, the natural areas will be maintained through avoidance and excluding those sensitive portions of the site from the Limit of Extraction. Enhancement of diversity and connectivity will be provided through;

- Ecological linkages in the study area will be improved. The area north of the existing quarry (Pit 3) and west of the northern end of the deciduous swamp shall be rehabilitated to enhance connectivity and wildlife movement between the deciduous swamp and the significant woodland located north of Second Concession Road between Carl Road and Babion Road. These two significant woodlands are separated by Second Concession Road and distance of approximately 70 metres. The area to be rehabilitated consists of a berm vegetated with terrestrial grasses and forbs and a sparsely vegetated area north of Pit 3.
- The setback area at the north end of extraction area 3 and east of the deciduous swamp will be supplemented with additional plantings to enhance connectivity and wildlife movement opportunities between the deciduous swamp and the hedgerow located east of the site woodland located northeast of the site across Second Concession Road. This area currently consists of a cultural meadow. The establishment of a wooded area will create a corridor linking the north end of the deciduous swamp with the forested areas offsite, including the significant woodland located between Carl Road and Babion Road. These additional plantings will also enhance ecological connectivity and facilitate wildlife movement between these features. Native tree and shrub species plantings should be selected based on their suitability for the soils and moisture regime in those areas.
- Along the perimeter of the site, and specifically within the extraction setback areas, once the perimeter berms have been removed, the lands will be subject to natural succession. This will encourage the growth of numerous ecological linkages along the perimeter of the lake and property boundaries.
- Bisecting SWD3-2 – Silver Maple Mineral Deciduous Swamp is the former Carl Road alignment. The segment of Carl Road that bisects the deciduous swamp shall be rehabilitated following the decommissioning of the road. This linear disturbance has enabled invasive plants to infiltrate the swamp interior and may be increasing predation pressure on wildlife from domestic and feral animals (cats and dogs) as well as opportunistic wild predators and scavengers that benefit from anthropogenic disturbance such as coyotes or raccoons. Excavations in three or four areas along the length of the road should be created to improve surface water drainage. Plantings along this segment of Carl Road should include the dominant tree and shrub species found in the deciduous swamp.

2.1.4 Development and site alteration shall not be permitted in:

a) significant wetlands in Ecoregions 5E, 6E and 7E1; and

Response: The design and development of the Pit 3 Extension will not include development or site alteration within a significant wetland as confirmed in the Natural Environment Level 1 and 2 Report (EIS), attached hereto as Appendix L.

2.1.5 Development and site alteration shall not be permitted in:

b) significant woodlands in Ecoregions 6E and 7E
c) significant valleylands in Ecoregions 6E and 7E

d) significant wildlife habitat;

e) significant areas of natural and scientific interest; and

Response: The design and development of the Pit 3 Extension will not include development or site alteration within i) a significant woodland, ii) significant valleylands, iii) significant wildlife

habitat, nor, iv) within an ANSI as confirmed in the Natural Environment Level 1 and 2 Report (EIS), attached hereto as Appendix L.

2.1.6 Development and site alteration shall not be permitted in fish habitat except in accordance with provincial and federal requirements.

Response: The Natural Environment Level 1 and 2 Report (EIS), attached hereto as Appendix L has identified potential fish habitat within the existing ponds sited on the former Humberstone Speedway lands. If fish are present, they will be removed prior to dewatering or destruction of the ponds. This will require a permit to collect fish for from MNRF and be obtained prior to relocation to avoid contravention of the Fisheries Act. Any native fish present are to be relocated to suitable nearby habitat and non-native fish are to be euthanized.

2.1.7 Development and site alteration shall not be permitted in habitat of endangered species and threatened species, except in accordance with provincial and federal requirements.

Response: The Natural Environment Level 1 and 2 Report (EIS), attached hereto as Appendix L has identified numerous Threatened and Endangered Species and/or potential habitat on and/or within 120 metres of the site including Bank Swallow, Bobolink, Eastern Meadowlark, Chimney Swift and Bats. The underlying intent of Pit 3 Extension design has been avoidance of such habitat and based on that, the design and development of the subject application does not include development or site alteration within such habitat except in accordance with provincial and federal requirements.

2.1.8 Development and site alteration shall not be permitted on adjacent lands to the natural heritage features and areas identified in policies 2.1.4, 2.1.5, and 2.1.6 unless the ecological function of the adjacent lands has been evaluated and it has been demonstrated that there will be no negative impacts on the natural features or on their ecological functions.

Response: The design and development of Pit 3 Extension has been evaluated in terms of the ecological functions of the subject site and adjacent lands, and demonstrated that there will be no negative impacts on the natural features or on their ecological habitat, as confirmed in the Natural Environment Level 1 and 2 Report (EIS), attached hereto as Appendix L and as supported by the Hydrologic (surface water) Assessment attached hereto as Appendix I.

6.1.3 Water

Policy 2.2 states that:

2.2.2 *Development and site alteration shall be restricted in or near sensitive surface water features and sensitive ground water features such that these features and their related hydrologic functions will be protected, improved or restored.*

Mitigative measures and/or alternative development approaches may be required in order to protect, improve or restore sensitive surface water features, sensitive ground water features, and their hydrologic functions.

Response: The design and development of the Pit 3 Extension includes development or site alteration in or near sensitive water features and sensitive groundwater features. However, mitigative measures including setbacks are to be used to improve and/or restore sensitive surface water features, sensitive groundwater features and their hydrologic functions as confirmed in both the Hydrological Assessment, attached hereto as Appendix I and the Natural Environment Level 1 and 2 Report (EIS), attached hereto as Appendix L. Furthermore, to confirm that the hydrologic functions are protected, improved or restored, monitoring related to surface water, groundwater and vegetation within the wetland will be carried out.

6.1.4 Agriculture

Policy 2.3.6.1 states that:

Planning authorities may only permit non-agricultural uses in prime agricultural areas for:

a) extraction of minerals, petroleum resources and mineral aggregate resources;

Response: It has been confirmed by the attached Agricultural Impact Assessment attached hereto as Appendix C that the subject lands are within a prime agricultural area. Therefore, the proposed land use of aggregate extraction by PCQ will be in conformity to this PPS Policy.

6.1.5 Mineral Aggregate Extraction

Policy 2.5.2.1 states that:

As much of the mineral aggregate resource that is realistically possible shall be made available as close to markets as possible.

Response: In addition to the prescribed setbacks mandated by the ARA, the technical studies undertaken in support of the application identified numerous land-use constraints, and in some situations, additional setback requirements, all which have reduced access to some of the rock resources at this time. However, through PCQ's acquisition of the Carl Road right-of-way, this will allow more resources to be available as well as enabling the overall extraction operation to be significantly more efficient.

Based on the availability of rock resources at this time, Golder has confirmed through the attached hydrogeological study that the site contains a large volume (40 – 50 million tonnes) of high-quality rock that meets Ontario Provincial Standard Specifications (OPSS) for road construction.

In addition, the application has included a reduction of the municipal setback to provincial highways from 90.0 metres (as specified in the City of Port Colborne Zoning By-Law) to 30.0 metres, which conforms to ARA Provincial Standards and ensures that as much resource as possible is made available. Access to these additional resources has been calculated to be approximately 1.3 million tonnes.

Policy 2.5.2.2 states that:

Extraction shall be undertaken in a manner which minimizes social, economic and environmental impacts.

Response: As part of this application, PCQ retained experts to undertake the following technical studies to demonstrate that the proposed quarry operation will minimize land use impacts including social, economic and environmental;

- Acoustical (Noise) Impact Study
- Agricultural Impact Assessment
- Air Quality (Dust) Assessment
- Archaeological Stage 1 and 2
- Blasting Impact Assessment
- Cultural Heritage Assessment
- Financial Impact Assessment
- Land Use Compatibility / Sensitive Land Use Assessment
- Hydrology (Surface water)
- Hydrogeology (Groundwater)
- Natural Environment Level 1 & 2 Report (EIS)
- Social Impact Assessment
- Traffic Impact Study
- Tree Preservation Plan

Each of these technical studies developed recommendations for Pit 3 Extension to ensure that the proposed quarry will operate with minimal land use impacts, and these recommendations have been incorporated into the Site Plans which, through specifically-dedicated MNRF enforcement staff, the Site Plan Notes are wholly enforceable. Therefore, subject to the approval of the Site Plans by the Minister of Natural Resources and Forestry (MNRF) the proposed land use of aggregate extraction by PCQ will be in conformity to this PPS policy.

In addition, because the Region, City and PCQ were persistent to secure a proposed Highway 3 entrance/exit with the provincial Ministry of Transportation, (MTO), this will reduce the travel distance of every truck for each and every trip by 1.4 km, resulting in significant energy savings and greenhouse gas reductions over the life of the quarry.

Policy 2.5.2.3 states that:

Mineral aggregate resource conservation shall be undertaken, including using accessory aggregate recycling facilities with operations, wherever feasible.

Response: The extracted rock from Pit 3 Extension will be transported initially west to the existing aggregate processing facility within PCQ Pit 2 until a new processing facility is sited within the existing Pit 3 lands. Within the existing facility (Pit 2) and as part of the proposed facility (Pit 3), PCQ will continue to undertake the off-site recycling of aggregate related resources (i.e., asphalt, concrete).

Policy 2.5.3.1 states that:

Progressive and final rehabilitation shall be required to accommodate subsequent land uses, to promote land use compatibility, to recognize the interim nature of extraction, and to mitigate negative impacts to the extent possible. Final rehabilitation shall take surrounding land use and approved land use designations into consideration.

Response:

Rehabilitation:

Because the proposed quarry will be extracted up to 16.0 metres below the natural groundwater level, the post-extractive land use options are limited. Furthermore, the existing Pit 3 lands (Licence 4444) is required by its' Site Plans to be rehabilitated to a large lake, and since the subject site will be an open extension to those lands, the final land use will also be the same.

Progressive Rehabilitation:

The result of a below water quarry which is operated 'in the dry' through dewatering, is that progressive rehabilitation is focused on two areas;

a) Fill: As extraction is completed progressively, moving through the 3 extraction phases, PCQ will progressively create side slopes. The side slopes from the top of the existing grade to the bottom of the quarry floor will be created using:

    i. on-site overburden,
    ii. excess waste rock/rubble,
    iii. during the final extraction phase, the redistribution of the topsoil/subsoil within the perimeter berms.

    The side slopes will range from the ARA minimum allowable slope of 2:1, (2 horizontal to 1 vertical) and increase in shallowness to 3:1 and 4:1.

    As part of the backfill program, and at the proposed final lake level of 178.0 masl, PCQ will create shallow permanent ponds (wetland enhancement areas) which will provide ecological diversity for both plant life and amphibian species. Once the ponds are constructed, they will be lined with a veneer of clay to retain precipitation to become functional without having to wait until the final extraction is completed and the overall lands (177 hectares) fill with water.

b) Vegetation: The post-extraction rehabilitation plan has been designed to fit into the overall regional context and complement the existing topography and terrestrial and aquatic features in the area. Because the extraction is below-water, the overall final rehabilitation plan will consist of a lake with surrounding wetland and upland areas.

All plantings (i.e., nodal plantings) included in the rehabilitation plan will be locally native, non-invasive species that create habitat in the short term and promote natural succession processes. The sourcing of plantings should consider the regionally adapted genetics of the species. Plantings from local sources are likely to be well adapted to the local climate and growing conditions and may have a higher likelihood of successful establishment. Therefore, plantings will be procured from local sources to the extent possible. Wetland and aquatic plants that may be planted in the nearshore or shoreline areas will include shrubs such as red-osier dogwood (*Cornus sericea*) and slender willow (*Salix petiolaris*), and herbaceous plants such as water plantain (*Alisma plantago-aquatica*), lake sedge (*Carex lacustris*), swamp milkweed (*Asclepias incarnata*), softstem bulrush (*Schoenoplectus tabernaemontani*), and common cattail (*Typha* spp.). Shallow wetland habitats will be created through construction of submerged benches, approximately 0.25 to 0.75 metres deep. Shallow emergent marsh vegetation (i.e., herbaceous species listed above) will be planted in water ±0.15 metres deep and extend ±5 metres from the shore and be interspersed with cover structures (e.g. boulders and root wads) in the shallow shoreline wetland areas. Organic material and topsoil will be added to the shoreline areas to promote shoreline vegetation. Basking logs, nesting platforms and boxes will be created for turtle, waterfowl and swallows respectively. This habitat will be designed to be suitable as snapping turtle aquatic habitat and bullfrog breeding habitat.

Upland areas will be seeded with a mix of grasses and legumes consisting of native, non-invasive species. It is recommended that common milkweed be planted in upland areas to provide host plants for monarch caterpillars. If terrestrial nodal plantings are included on the side slopes, they will include a mixture of coniferous and deciduous tree species to promote species diversity and provide a variety of species to compensate for any substrate deficiencies. The species may include white pine, sugar maple, red oak, trembling aspen, and white birch, with a secondary focus on species such as choke cherry (*Prunus virginiana*), alternate-leaved dogwood (*Cornus alternifolia*), highbush cranberry (*Viburnum opulus*), nannyberry (*Viburnum lentago*) and serviceberry (*Amelanchier* spp.). It is recommended that ash (*Fraxinus* spp.) species in rehabilitation plantings be avoided due to the invasion of emerald ash borer.

Final Rehabilitation:

As noted above, the final rehabilitated land use will be a large lake encompassing some 65 hectares (Pit 3 Extension lands) and overall, a lake that is approximately 117 hectares, when combined with the final rehabilitated proposed Pit 3 lake. The proposed lake will range in depth from 8.0 to 16.0 metres deep. The creation of such a lake will be in keeping with the surrounding land uses since Pit 2, also part of Licence 4444, and which is also required to be rehabilitated to a lake with a similar depth, and it will total approximately 50.0 hectares.

Policy 2.5.3.2 states that:

Comprehensive rehabilitation planning is encouraged where there is a concentration of mineral aggregate operations.

Response: It is recognized that the majority of the lands within the subject block bounded by Highway 140, Highway 3, Miller Road and Second Concession are all occupied by either active or previous quarry extraction activity. At this time, Licence 4444 (Pit 2 and Pit 3) are proposed to be rehabilitated into two separate large lakes. Significant progressive rehabilitation efforts have occurred around the perimeter of these two sites including sloping, tree planting and other vegetation planting.

For purposes of completeness, we will include comment on the PCQ Pit 1 lands. As noted above, these lands are not licensed under the *Aggregate Resources Act* (ARA) as full extraction of these lands occurred even prior to its predecessor, the *Pits and Quarries Control Act*, (1971). It is acknowledged that there is some documentation that these lands were also intended to be rehabilitated to a lake. Notwithstanding this and given that site's strategic location in terms of transportation, access, and visibility, PCQ continue to envision and advocate that the 'highest and best' use for those lands would be light-medium industrial. Refer also to the Comprehensive Rehabilitation Strategy attached hereto as Appendix M.

Based on the above, it is our opinion that the creation of a 65 Ha. lake conjoined with the Pit 3 lands to create a 117 hectare lake, will be in keeping with the overall future landscape. In addition, the continuation of the lands fronting onto Highway 3 (1252 and 1326) as agriculture, will also be in keeping with the general character of the landscape as that is the predominate land use south of the site.

Policy 2.5.4.1 regarding extraction in Prime Agricultural Areas states that:

In prime agricultural areas, on prime agricultural land, extraction of mineral aggregate resources is permitted as an interim use provided that the site will be rehabilitated back to an agricultural condition.

Complete rehabilitation to an agricultural condition is not required if:

a) 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;

Response: We note that complete agricultural rehabilitation is not being sought nor required based on the following responses. The response to Policy 2.5.4.1 a) is sub-divided as follows:

i. 'outside of a specialty crop area'

As confirmed in the Agricultural Impact Assessment, (Appendix C) the subject lands are designated as Agricultural, but are outside of a designated specialty crop land area.

ii. there is a substantial quantity of *mineral aggregate resources* below the water table warranting extraction,

As confirmed in the Hydrogeological Assessment, (Appendix J), Golder has calculated that the site contains a large volume (40 – 50 million tonnes) of rock. This calculation considered the prescribed setbacks mandated by the ARA, and the technical studies undertaken in support of the application which identified numerous land-use constraints, and in some situations, additional setback requirements were applied. Based on those areas, Golder then interpolated the borehole documents available as well as the open quarry face of Pit 3 and knowing the general depth and characteristics of the underlying rock deposit, professional estimations as to the depth of the quality resource was utilized.

About rock quality, Golder has once again reviewed the existing Pit 3 face and examined the well drillings from the subject site and have confirmed which portions (by depth) of that the accessible rock will meet Ontario Provincial Standard Specification (OPSS) for road construction specifications.

PCQ has requested that the permitted annual tonnage volume be consistent with the historical level for Pit 2 and 3 being 1,881,500 tonnes. Given this maximum annual tonnage volume, the quarry would have a minimum life span of 21 – 25 years. Based on historical quarry extraction levels along with anticipated market increases, practically, the life span of the quarry is expected to be somewhat longer and in the range of 30 to 40 years. Therefore, based on the overall tonnage volume and the anticipated duration that Pit 3 Extension, this would be deemed by typical industry standards as being substantial.

iii. or the depth of planned extraction in a quarry makes restoration of pre-extraction agricultural capability unfeasible;

As confirmed in the Hydrogeological Assessment, (Appendix J), Golder has determined that the natural water table elevation is generally at 178.0 masl and the depth of the quality rock extends to about 162 to 169.5 masl, resulting in the final quarry floor ranging from 8.0 to 16.0 metres below the water level. Although there is an abundance of excess clean inert fill within southern Ontario, the costs associated with trucking to back-fill the quarry by as much as 9.0 metres deep (retaining a 2.0 metre buffer above the known water table) in order to restore the site to a pre-extraction agricultural capability is not being considered. The ability to backfill the site might be practical and possible for higher order land uses such as residential or industrial uses, but not for agriculture.

c) 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

Response: Alternatives have been considered by the applicant and found unsuitable. Several variables have been considered to make this determination.

a) Bedrock Resources: The City of Port Colborne Official Plan – Schedule C (Mineral Aggregate and Petroleum Resources) illustrates the extent of the 'primary rock deposits', referenced as Bobcaygeon and Onondaga. Note: Golder made a determination that the reference to the Bobcaygeon material is incorrect as it is actually Bois Blanc Formation. Figure 8 within the AIA identifies the extent of these deposits within the City of Port Colborne which are located partially north of the subject site, but primarily to the east, extending over 8.0 kilometres to the city limit.

b) Agricultural Resources: All of the lands within the primary rock deposits are designated as Agricultural by the City of Port Colborne (Schedule A – City Wide Land Use) and all the lands are designated as Good General Agricultural Area by the Niagara Region Official Plan (Schedule B). As such, there is no differentiation of agricultural soil quality between the subject lands and those within the balance of the 'primary rock deposit' area. The AIA, Figure 2 provides a more detailed breakdown of the CLI classification, with most of the soils within the identified bedrock resource area being CLI 2 and 3.

c) Natural Environment: Extraction is not permitted within most environmental areas, and as such, areas identified and protected by natural environment policies would be determined to be a land use constraint.

d) Lot Fragmentation: There is no established or pre-determined minimum size required for a quarry producing general road construction material, however, in practical terms, in order for an operator to have sufficient land area for a) land use buffers and setbacks, and b) a large volume of quantity of rock resource to extract in order to justify the capital expense of licensing, it is our experience that as a minimum, a prospective site should to be approximately 60 hectares, and preferably as square as possible. Based on this variable, there are few sites within the 'primary rock deposit' that are of that size. However, it is possible through the assembly of multiple properties to amass a parcel that would meet and exceed such a minimum area.

   Figure 8 of the AIA has identified eight possible land parcels and/or assembly sites within the 'primary rock deposit area'. However, PCQ does not own any of these parcels and at this time, they are not aware of any of these sites being available for purchase either individually or as multiple blocks.

Although not a land-use consideration, but certainly a key factor for an operator is the ability to extend an existing quarry operation to capitalize on the existing quarry infrastructure and

operational efficiency such as the processing plant, (crushing, screening, blending, washing), weigh scale, administrative and repair facilities, etc.). As such, for PCQ to progress seamlessly eastward from their existing Pit 3 operation would be a significant operational advantage.

Based on the above, although numerous alternate sites have been identified, the proposed Pit 3 Extension site has been deemed to be the only available site.

d) agricultural rehabilitation in remaining areas is maximized.

Response: As a result of the rehabilitation design, the southwest portion of the site excluded from the Limit of Extraction (i.e., 1252 and 1326 Main Street, and where agriculture currently occurs), will continue to be available as an on-going agricultural use. For the balance of the site, the only remaining areas that won't be either lake or lake side slopes will be the narrow strips of land remaining as setbacks and these will be rehabilitated according to the rehabilitation concept.

6.1.6 Cultural Heritage and Archaeology

Policy 2.6 states that:

2.6.1 Significant built heritage resources and significant cultural heritage landscapes shall be conserved.

Response: The Archaeological Stage 1 and 2 Assessments attached hereto as Appendix E i) and E ii) and the Cultural Heritage Screening Report attached hereto as Appendix G confirm that the site does not contain any significant built heritage resources nor significant cultural heritage landscapes.

2.6.2 Development and site alteration shall not be permitted on lands containing archaeological resources or areas of archaeological potential unless significant archaeological resources have been conserved.

Response: The Archaeological Stage 1 and 2 Assessments attached hereto as Appendix E i) and E ii) and the Cultural Heritage Screening Report attached hereto as Appendix G. Specifically, through the completion of these reports, significant archaeological resources have been identified and either avoided or recommendations included for no-go zone buffers which will remain in place until the completion of additional archaeological assessments (Stage 3) are undertaken. Other portions of the site which have been found to have significant archaeological resources through Stage 1 and 2 reports, have been excluded at this time from the Limit of Extraction (i.e., 1252 and 1326 Main Street).

6.1.7 Human-Made Hazards

Policy 3.2.1 states that:

Natural Hazards

3.1.2 *Development* and *site alteration* shall not be permitted within:

d) a floodway regardless of whether the area of inundation contains high points of land not subject to flooding

Response: It is acknowledged that portions of the site (those which generally parallel the Wignell Drain), are within the NPCA Regulation Lands (Ontario Regulation 97/04) and therefore deemed to be within a floodway.

A review the PPS Definitions for *Development* and *Site Alteration is as follows:*

Development: means the creation of a new lot, a change in land use, or the construction of buildings and structures requiring approval under the Planning Act, but does not include:

a) activities that create or maintain infrastructure authorized under an environmental assessment process;

b) works subject to the Drainage Act; or

c) for the purposes of policy 2.1.4(a), underground or surface mining of minerals or advanced exploration on mining lands in significant areas of mineral potential in Ecoregion 5E, where advanced exploration has the same meaning as under the Mining Act. Instead, those matters shall be subject to policy 2.1.5(a)

Site alteration: means activities, such as grading, excavation and the placement of fill that would change the landform and natural vegetative characteristics of a site. For the purposes of Policy 2.1.4(a), site alteration does not include underground or surface mining of minerals or advanced exploration on mining lands in significant areas of mineral potential in Ecoregion 5E, where advanced exploration has the same meaning as in the Mining Act. Instead, those matters shall be subject to Policy 2.1.5(a).

The above definitions are focused on the construction of and/or building-up (placement of fill) of the land with an expectation to interfere with the flow of floodwater and potentially result in property damage. The purpose and intent of this application is the excavation of a quarry which is the exact opposite of the placement of fill, as it in fact will increase the floodplain capacity.

Additionally, the definition of Mineral mining operation: means *mining operations and associated facilities, or, past producing mines with remaining mineral development potential that have not been permanently rehabilitated to another use.*

And

The Definition of Mineral aggregate resource conservation means:

a) the recovery and recycling of manufactured materials derived from mineral aggregates (e.g., glass, porcelain, brick, concrete, asphalt, slag, etc.), for re-use in construction, manufacturing, industrial or maintenance projects as a substitute for new mineral aggregates; and

b) the wise use of mineral aggregates including utilization or extraction of on-site mineral aggregate resources prior to development occurring.

Both of these definitions provide an important differentiation between the interim 'extraction' operation of the mineral aggregate resources versus 'development'.

Therefore, although the quarry licence will encompass NPCA regulated floodplain lands, the provision of the quarry extraction will allow for an increase in the floodplain storage area.

Policy 3.2 states that:

3.2.1 Development on, abutting or adjacent to lands affected by mine hazards; oil, gas and salt hazards; or former mineral mining operations, mineral aggregate operations or petroleum resource operations may be permitted only if rehabilitation or other measures to address and mitigate known or suspected hazards are under way or have been completed.

Response: The Pit 3 Extension will be developed on lands abutting an active 'mineral aggregate operation', (Pit 3). Based on the Hydrology Assessment (Appendix I), and the Hydrogeological Assessment (Appendix J), no known or suspected hazards on those abutting lands were identified.

3.2.2 Sites with contaminants in land or water shall be assessed and remediated as necessary prior to any activity on the site associated with the proposed use such that there will be no adverse effects.

Response: A portion of the Pit 3 Extension lands encompass the New Humberstone Speedway and because they may potentially contain petroleum related containments, the following investigations were undertaken:

a) A Phase One Environmental Site Assessment (ESA) prepared by Golder Assoc. dated June 16, 2021 and,
b) Conceptual Soil Management Plan prepared by Golder Assoc. dated June 28, 2021.

The report recommends that all topsoil and subsoil stripped from the former Humberstone Speedway will be used exclusively for the construction of berms along the Highway 3 frontage with the exception of soil where the quality exceeds the applicable MECP Site Condition Standards. When the Phase Two ESA investigation is completed the quality of the soil at the site will be determined and any soil that exceeds the applicable MECP Site Condition.

6.1.8 Summary of Provincial Policy Statement Policies

As part of the planning review for the Pit 3 Extension, the Provincial Policy Statement (2020) (PPS) were considered as they provide policy direction on matters of provincial interest related to land-use planning and development. As part of that review, it is acknowledged that the PPS is more than a set of individual policies but rather it was read in its entirety and the relevant policies were applied including:

- Policy 1.7 Long-Term Economic Prosperity
  - 1.7.1 a) c) e) i)
- Policy 2.1 Natural Heritage
  - 2.1.1
  - 2.1.2
  - 2.1.4
  - 2.1.5
  - 2.1.6
  - 2.1.7
  - 2.1.8
  - 2.1.9
- Policy 2.2 Water
  - 2.2.2
- Policy 2.3 Agriculture
  - 2.3.6.1
- Policy 2.5 Mineral Aggregate Resources
  - 2.5.2.1
  - 2.5.2.2
  - 2.5.2.3
  - 2.5.3.1
  - 2.5.3.2
  - 2.5.4.1 a) c) d)
- Policy 2.6 Cultural Heritage
  - 2.6.1
  - 2.6.2
- Policy 3.2 Human-Made Hazards
  - 3.2.1
  - 3.2.2

Based on the above review, it is our opinion that the Pit 3 Extension and specifically the submitted Site Plans, which have been designed based on the recommendations from the numerous technical studies are consistent with the above noted policies of the Provincial Policy Statement.

6.2 Growth Plan for the Greater Golden Horseshoe 2014

As stated in Section 5.2.1 (1) under General Interpretation of the Growth Plan for the Greater Golden Horseshoe 2014, "*The policies and schedules of this Plan should be read in a manner that recognizes this Plan as an integrated policy framework".*

Based on this, we have determined that the relevant policies of the Growth Plan as it relates to the Pit 3 Extension application are:

- 3.2.7 Stormwater Management
- 4.2.2 Natural Heritage System
- 4.2.3 Key hydrologic features, key hydrologic areas and Key natural heritage features
- 4.2.4 Lands adjacent to key hydrologic features and key natural heritage features
- 4.2.6 Agricultural System
- 4.2.8 Mineral Aggregate Resources

6.2.1 Stormwater Management

Policy 3.2.7 states that:

Proposals for large-scale development proceeding by way of a secondary plan, plan of subdivision, vacant land plan of condominium or site plan will be supported by a stormwater management plan or equivalent, that:

a. is informed by a subwatershed plan or equivalent;

Response: No subwatershed plan has been undertaken nor was it a requirement based on the Pre-Submission Consultation, however, extensive on-site surface and groundwater investigations have been completed as part of the Hydrological and Hydrogeological Assessments attached hereto as Appendix I and J. These reports also rely on decades of monitoring data from the existing PCQ quarry operations within Pit 2 and 3.

Section 4 in Appendix I, detailing the Hydrological (Surface Water) Study, which was included in the November 2020 Golder report "Hydrological Assessments in Support of Aggregate Resources Act Applications for the Port Colborne Quarries Inc. Proposed Pit 3 Extension, Port Colborne, Ontario" identified potential impacts to surface water resources, specifically sub-watershed / sub-catchment areas contributing to the East and West Branch of the Wignell Drain. These areas include the catchments north of the 2nd Concession Road contributing to the existing and proposed site boundaries.

The findings indicated that although annual flows will increase under operational and rehabilitated conditions, surface water receivers are not expected to be significantly affected by the operations as peak flows are not expected to exceed those experienced under existing conditions since the discharge will be regulated. The Pit 3 Extension Stormwater Management Plan included in the Hydrological Study utilized the extraction area and setback areas for the spatial extents because the East Wignell Drain will be realigned around the extraction area and any overland flow out side of the quarry will be directed towards the drain through berms and ditching.

Therefore, the quarrying will only intercept the water budget components that originate in the extraction area and setbacks.

As part of the Environmental Compliance Approval (ECA) component that would be completed prior to initiating the proposed Pit 3 Extension operations, an updated stormwater management plan will be developed and refined based on input from staging development plans. The plan will include mitigation measures to limit or prevent impacts to the drain/receiving watercourse due to changes occurring on the site.

b. incorporates an integrated treatment approach to minimize stormwater flows and reliance on stormwater ponds, which includes appropriate low impact development and green infrastructure;

Response: Since the Pit 3 application is for the development of a quarry, during the life of the active quarry operation, storm-water captured on-site will be captured by the quarry dewatering pumps and discharged to the west or east branch of the Wignell Drain. As part of the discharge, the appropriate MECP discharge effluent approvals (ECA No. 6607-8X7GTZ) will be required and/or extended from the existing approvals for Pit 3. Post-extraction, this development application (Pit 3 Extension) in association with the existing active Pit 3 quarry lands will result in a final lake that is of 65 hectares in size, and thus any stormwater flows will be captured directed toward that lake.

On the peripheral of the site and outside the Limit of Extraction, there will be no increase in surface water flows toward the existing road ditch system for either: i) Provincial Highway 3, (Main St.), ii) Regional Road 84 (Miller Road) or iii) the City of Port Colborne (Second Concession Road) since no excavation will occur beyond the Limit of Extraction. These setbacks are 30.0 metres along Highway 3, Miller Road and Second Concession Road and 15.0 metres everywhere else that abuts lands owned by others.

c. establishes planning, design, and construction practices to minimize vegetation removal, grading and soil compaction, sediment erosion, and impervious surfaces; and

Response: The Pit 3 Extension will result in the extraction of approximately 40 – 50 million tonnes of rock from the subject lands, of which the 8.0 metres to 16.0 metres of excavation will occur below the groundwater. In order to accomplish this, all the vegetation from within the extraction area will be progressively removed prior to each extraction phase being initiated. This vegetation is primarily in the form of row crops. The only exception will be the removal of a small grove of trees referenced as FOD7-2 – Moist Ash Lowland Deciduous Forest being dominated by immature green ash and wet areas dominated by red-osier dogwood and pussy willow, all which corresponds with extraction Phase 2.

A Tree Preservation Plan has been completed (See Appendix P) which recommended that the trees within FOD7-2 (Vegetation Units ‘A’, ‘B’, and ‘C’) be removed to permit the Phase 2 extraction. The presence of Emerald Ash Borer damage, high occurrence of Ash trees, pioneer species and possible restoration plantings, within the study area as well as the relatively young age of the trees present on site contribute to a low preservation priority for the FOD7-2 feature.

The Report also provide numerous recommendations for tree protection for the surrounding woodlot areas that are to be retained.

To facilitate progressive extraction and rehabilitation, as each portion of the quarry is completed, PCQ will commence progressive rehabilitation that will include the backfilling of the side slopes with either on-site overburden or waste rock. These backfilled slopes will range from the ARA minimum allowed being 2:1 (horizontal to vertical) to shallower slopes of 3:1 to 4:1. Upon being created, the side slopes will be vegetated to maximize erosion and sediment control and include native species of groundcover as well as a range of shrubs and trees around what will eventually be the final 65 hectare lake shoreline. Refer to the Site Plans.

Based on the above, the Pit 3 Extension will not create new impervious surfaces but rather provide a site where stormwater from the surrounding lands will be accepted, and as confirmed in the Hydrological Assessment attached hereto as Appendix I.

d. aligns with the stormwater master plan or equivalent for the settlement area, where applicable.

Response: The City of Port Colborne does not have a Stormwater Master Plan that includes the subject lands.

6.2.2 Natural Heritage System

Policy 4.2.2 states that:

3. Within the Natural Heritage System for the Growth Plan:

a. new development or site alteration will demonstrate that:

i. there are no negative impacts on key natural heritage features key hydrologic features or their functions;

Response:

The subject site is not within the mapped Growth Plan Natural Heritage System (NHS). Although because of the changes that were made from the 2017 and 2019 Growth Plan, some of the Growth Plan NHS policies apply to the Region's existing natural heritage system [the mapped] Growth Plan NHS does not apply until the Region has completed its municipal comprehensive review.

As confirmed in the Natural Environment Level 1 and 2 Report (EIS), attached hereto as Appendix L, the proposed extraction will be within a key hydrologic feature which has been identified as the potential for fish within the existing ponds sited on the former Humberstone Speedway lands. If fish are present, they will be removed prior to dewatering or destruction of the ponds. This will require a permit to collect fish for from MNRF and be obtained prior to relocation to avoid contravention of the Fisheries Act. Any native fish present are to be relocated to suitable nearby habitat and non-native fish are to be euthanized.

ii. connectivity along the system and between key natural heritage features and key hydrologic features located within 240 metres of each other will be maintained or, where possible, enhanced for the movement of native plants and animals across the landscape;

Response: There is one Key Natural Heritage Area north of the existing quarry. The area north of the existing quarry (Pit 3) and west of the northern end of the deciduous swamp shall be rehabilitated to enhance connectivity and wildlife movement between the deciduous swamp and the significant woodland located north of Second Concession Road between Carl Road and Babion Road. These two significant woodlands are separated by Second Concession Road and a distance of approximately 70 metres.

The area to be rehabilitated consists of a berm vegetated with terrestrial grasses and forbs and a sparsely vegetated area north of Pit 3.

The setback area at the north end of extraction area 3 and east of the deciduous swamp will be supplemented with additional plantings to enhance connectivity and wildlife movement opportunities between the deciduous swamp and the hedgerow located east of the site woodland located northeast of the site across Second Concession Road. This area currently consists of a cultural meadow. The establishment of a wooded area will create a corridor linking the north end of the deciduous swamp with the forested areas offsite, including the significant woodland located between Carl Road and Babion Road. These additional plantings will also enhance ecological connectivity and facilitate wildlife movement between these features. Native tree and shrub species plantings should be selected based on their suitability for the soils and moisture regime in those areas.

iii. the removal of other natural features not identified as key natural heritage features and key hydrologic features is avoided, where possible. Such features should be incorporated into the planning and design of the proposed use wherever possible;

Response: The Natural Environment Level 1 and 2 Report (EIS), attached hereto as Appendix L, was prepared based on 'terms of reference' approved by the Region of Niagara and the NPCA to ensure that all key natural heritage features and key hydrological features were identified and evaluated. There are no other known features which have not been evaluated.

iv. at least 30 per cent of the total developable area will remain or be returned to natural self-sustaining vegetation, except where specified in accordance with the policies in subsection 4.2.8; and

Response: With the exception of the two small farm parcels fronting onto Highway 3 (1252 and 1326 Main Street) which will continue to be available for agriculture (7.0 hectares), and the proposed final extracted lake (65.0 hectares), the balance of the site will remain or be returned to natural self-sustaining vegetation including the lake side slopes above 178.0 masl and the setback areas.

b. the full range of existing and new agricultural uses, agriculture-related uses, on-farm diversified uses, and normal farm practices are permitted. However, new buildings or structures for agricultural uses, agriculture-related uses, or on-farm diversified uses are not subject to policy 4.2.2.3 a), but are subject to the policies in subsections 4.2.3 and 4.2.4.

Response: In accordance with the policies in subsection 4.2.8, the subject lands will be developed into a post-extractive lake in conjunction with the Pit 3 lands will ultimately be 117 hectares, with a depth of 8.0 metres to 16.0 metres deep. Based on Policy 4.2.2 a vi), the upper portions of the side slopes of the lake (above 178.0 masl), will be planted to create a natural self-sustaining vegetation as noted on the Rehabilitation Plans.

The two small farm parcels fronting onto Highway 3 (1252 and 1326 Main Street) will continue to be available for agriculture.

6.2.3 Key Hydrologic Features, Key Hydrologic Areas and Key Natural Heritage Features

Policy 4.2.3 states that:

1. Outside of settlement areas, development or site alteration is not permitted in key natural heritage features that are part of the Natural Heritage System for the Growth Plan or in key hydrologic features, except for:

d. mineral aggregate operations and wayside pits and quarries;

Response: The Pit 3 Extension has been designed to ensure that *development* or *site alteration* of the quarry will not occur within *key natural heritage features* that are part of the *Natural Heritage System for the Growth Plan* or in *key hydrologic features* as confirmed in the Hydrology Assessment (Appendix I) and the Natural Environment Level 1 and 2 Report (EIS), attached hereto as Appendix L. Specifically, such features were identified and evaluated and then intentionally excluded from the limit of extraction including the implementation of appropriate buffers.

The policy allows for mineral aggregate operations as the subject site is within a key hydrologic feature identified and evaluated which includes the potential for fish habitat within the former Humberstone Speedway ponds, and if present, will be removed prior to dewatering or destruction of the ponds. This will require a permit to collect fish for from MNRF and be obtained prior to relocation to avoid contravention of the Fisheries Act. Any native fish present are to be relocated to suitable nearby habitat and non-native fish are to be euthanized.

2. Outside of settlement areas, proposals for large-scale development proceeding by way of plan of subdivision, vacant land plan of condominium or site plan may be permitted within a key hydrologic area where it is demonstrated that the hydrologic functions, including the quality and quantity of water, of these areas will be protected and, where possible, enhanced or restored through:

a. the identification of planning, design, and construction practices and techniques;

Response: The subject site is within a key hydrologic feature as identified by the Natural Environment Level 1 and 2 Report (EIS), attached hereto as Appendix L. As summarized from

the NEL 1 / 2 - Technical Memorandum dated November 24, 2021, "The groundwater levels in the wetland area were measured in monitoring wells installed in boreholes drilled in the wetland areas which indicated the presence of clayey soil deposits beneath the wetland. These can also be visually observed from the east wall of Pit 3 of the existing quarry. The groundwater levels beneath the wetland are shallow reflecting the low permeability of the clay deposits which have not experienced significant drawdown even though they are adjacent to the existing quarry. This condition is expected to persist in the future for the proposed extension and will be confirmed by the monitoring program".

The NEL 1 / 2 - Technical Memorandum dated November 24, 2021, also noted, "The deciduous swamp at the north end of the study area maintains standing water or wet conditions for portions of the year. This feature contributes drainage to the upstream end of the Wignell Drain. The wetland feature may collect surface drainage from north of Second Concession Road but does not collect runoff from the extraction area to the north".

A more detailed description of the site hydrogeology is provided in the Hydrogelogical Report (Appendix J). Furthermore, the EIS identified the potential for fish habitat within the former Humberstone Speedway ponds, and if present, will be removed prior to dewatering or destruction of the ponds. This will require a permit to collect fish for from MNRF and be obtained prior to relocation to avoid contravention of the Fisheries Act. Any native fish present are to be relocated to suitable nearby habitat and non-native fish are to be euthanized. Because the ponds are not connected to any downstream fish-bearing surface water features, authorization under the Fisheries Act is not required.

Similar to previous statements, for the Environmental Compliance Approval (ECA) component that would be completed for the project, a hydrologic/hydraulic assessment will be completed to address flow, water quality, geomorphologic and ecological considerations within the site and subwatershed/subcatchment areas during consultation with MECP, including, but not limited to:

- Mitigation measures will be developed to address site specific operations, similar to operations currently taking place at the existing licensed area.
- An erosion assessment of the downstream portions of the East and West Wignell Drains will be completed, including investigating conditions of the drain approximately 500 m upstream and downstream (where access is permitted), as part of the ECA application and stream monitoring will be evaluated during this process.
- Pit 3 Extension water quality during operations is expected to be similar to the quality of the existing Port Colborne Quarries, as extraction in the extension will be into similar rock units and quarry water will be managed in the sumps in a similar way. In particular, the discharge waters to the proposed East Wignell Drain is expected to have similar water quality concentrations to the existing quarry discharge conveyed to the West Wignell Drain. Water quality measurements of discharge waters from the proposed Pit 3 Extension will be collected from discharge to the East Wignell Drain as required by the future (amended) ECA. Parameters of interest and associated discharge objectives will be determined during the ECA amendment as part of discussions with the respective CA and MECP agencies, but they are expected to be similar to the parameters currently measured at the existing quarry.
- Best Management Practices will also be incorporated, such as the handing and management of petroleum products to be added in the operational notes and mitigation plan determined during the ECA planning stage.

b. meeting other criteria and direction set out in the applicable watershed planning or subwatershed plans; and

Response: No watershed planning or subwatershed plans have been undertaken to provide any other criteria. As part of the Environmental Compliance Approval (ECA) component that would be completed for the project, a hydrologic/hydraulic assessment of the receiving stream will be completed to address flow, water quality, geomorphologic and ecological considerations within the sub-watershed / sub-catchment area during consultation with MECP.

c. meeting any applicable provincial standards, guidelines, and procedures.

Response: The meeting of provincial standards, guidelines and procedures has been done and is addressed in Section 6.16 of this report.

6.2.4 Lands Adjacent to Key Hydrologic Features and Key Natural Heritage Features

Policy 4.2.4 states that:

1. Outside settlement areas, a proposal for new development or site alteration within 120 metres of a key natural heritage feature within the Natural Heritage System for the Growth Plan or a key hydrologic feature will require a natural heritage evaluation or hydrologic evaluation that identifies a vegetation protection zone, which:

a. is of sufficient width to protect the key natural heritage feature or key hydrologic feature and its functions from the impacts of the proposed change;

b. is established to achieve and be maintained as natural self-sustaining vegetation; and

c. for key hydrologic features, fish habitat, and significant woodlands, is no less than 30 metres measured from the outside boundary of the key natural heritage feature or key hydrologic feature.

Response: As confirmed in the Natural Environment Level 1 and 2 Report (EIS), attached hereto as Appendix L, the subject site is within 120 metres of a key natural heritage feature and within a key hydrologic feature. The key natural heritage feature is located just north of the existing quarry and the key hydrologic feature is identified as being potential for fish habitat within the former Humberstone Speedway ponds.

Ecological linkages between the key natural heritage features in the study area will be improved. The area north of the existing quarry (Pit 3) and west of the northern end of the deciduous swamp shall be rehabilitated to enhance connectivity and wildlife movement between the deciduous swamp and the significant woodland located north of Second Concession Road between Carl Road and Babion Road. These two significant woodlands are separated by Second Concession Road and distance of approximately 70 metres. The area to be rehabilitated consists of a berm vegetated with terrestrial grasses and forbs and a sparsely vegetated area north of Pit 3.

The setback area at the north end of extraction area 3 and east of the deciduous swamp will be supplemented with additional plantings to enhance connectivity and wildlife movement opportunities between the deciduous swamp and the hedgerow located east of the site woodland located northeast of the site across Second Concession Road. This area currently consists of a cultural meadow. The establishment of a wooded area will create a corridor linking the north end of the deciduous swamp with the forested areas offsite, including the significant woodland located between Carl Road and Babion Road. These additional plantings will also enhance ecological connectivity and facilitate wildlife movement between these features. Native tree and shrub species plantings should be selected based on their suitability for the soils and moisture regime in those areas.

The key hydrologic feature, if fish are present, will be removed prior to dewatering or destruction of the ponds. This will require a permit to collect fish for from MNRF and be obtained prior to relocation to avoid contravention of the Fisheries Act. Any native fish present are to be relocated to suitable nearby habitat and non-native fish are to be euthanized.

2. *Evaluations undertaken in accordance with policy 4.2.4.1 will identify any additional restrictions to be applied before, during, and after development to protect the hydrologic functions and ecological functions of the feature.*

Response: The Hydrology Assessment (Appendix I), Hydrogeological Assessment (Appendix J) and the Natural Environment Level 1 and 2 Report (EIS), attached hereto as Appendix L were undertaken in accordance with Policy 4.2.4.1 and recommended applicable restrictions before, during and after the development of the quarry to protect the protect the hydrologic functions and ecological functions of the feature. These recommendations include the ongoing monitoring of surface water and groundwater monitors, the evaluation of the vegetation within SWD3-2 – Silver Maple Mineral Deciduous Swamp during the operational life of the quarry, and have been included onto the Site Plans, all which are enforceable by provincial staff of the Ministry of Natural Resources and Forestry.

As well, within the key hydrologic feature, if fish are present, they will be removed prior to dewatering or destruction of the ponds. This will require a permit to collect fish for from MNRF and be obtained prior to relocation to avoid contravention of the Fisheries Act. Any native fish present are to be relocated to suitable nearby habitat and non-native fish are to be euthanized.

3. Development or *site alteration* is not permitted in the *vegetation protection zone*, with the exception of that described in policy 4.2.3.1 or shoreline *development* as permitted in accordance with policy 4.2.4.5.

Response: The exception noted in Policy 4.2.3.1 allows for mineral aggregate operations within key natural heritage features that are part of the Natural Heritage System for the Growth Plan and key hydrologic features.

6.2.5 Agricultural System

Policy 4.2.6 states that:

2. *Prime agricultural areas, including specialty crop areas, will be designated in accordance with mapping identified by the Province and these areas will be protected for long-term use for agriculture.*

Response: The subject lands are designated as a prime agricultural area, however, as specified under 4.2.8 (3) (Mineral Aggregate Resources) and as noted below, in such areas, applications for new mineral aggregate operations are permitted subject to being supported by an agricultural impact assessment and, where possible, where the new mineral aggregate operation seeks to maintain or improve connectivity of the Agricultural System. The Agricultural Impact Assessment (AIA) is attached hereto as Appendix C. and has identified and provided recommendations on how Pit 3 Extension seeks to maintain or improve connectivity of the Agricultural System.

3. *Where agricultural uses and non-agricultural uses interface outside of settlement areas, land use compatibility will be achieved by avoiding or where avoidance is not possible, minimizing and mitigating adverse impacts on the Agricultural System. Where mitigation is required, measures should be incorporated as part of the non-agricultural uses, as appropriate, within the area being developed. Where appropriate, this should be based on an agricultural impact assessment.*

Response: The Agricultural Impact Assessment (AIA) is attached hereto as Appendix C. and has identified how Pit 3 Extension has provided land use compatibility by avoiding or where avoidance is not possible, minimizing and mitigating adverse impacts on the *Agricultural System*. Mitigation measures have been recommended and incorporated into the ARA Site Plans relative to activities prior to, during and after extraction occurs.

4. *The geographic continuity of the agricultural land base and the functional and economic connections to the agri-food network will be maintained and enhanced.*

Response: The Agricultural Impact Assessment (AIA) is attached hereto as Appendix C. and has identified how Pit 3 Extension has maintained geographic continuity of the agricultural land base and the functional and economic connections to the *agri-food network* has been maintained.

5. *The retention of existing lots of record for agricultural uses is encouraged, and the use of these lots for non-agricultural uses is discouraged.*

Response: The subject lands have been designated as a prime agricultural area, however, as specified under 4.2.8 (3) (Mineral Aggregate Resources) and as noted below, in such areas, applications for new mineral aggregate operations are permitted subject to being supported by an agricultural impact assessment. The Agricultural Impact Assessment (AIA) is attached hereto as Appendix C. and has identified how Pit 3 Extension seeks to maintain or improve connectivity of the Agricultural System, including where lots of record are not retained. Specifically, the application reflects the inclusion of all the PCQ lands, even those lands were extraction is not being proposed.

6. *Integrated planning for growth management, including goods movement and transportation planning, will consider opportunities to support and enhance the Agricultural System.*

Response: The AIA has provided numerous recommendations to support the Agricultural System some of which include:

- Excess topsoil not required for berm construction or post-extractive rehabilitation could be used to accommodate and 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.
- Appropriate buffering abutting agricultural lands shall employ such things as:
  i. Vegetated berms, which can offer both visual and physical buffers,
  ii. Dust suppression techniques and noise management according to appropriate regulations.
- Perimeter fencing shall be established to minimize the potential for trespass and vandalism.
- Providing farm-equipment access that doesn't require traversing the active operational portion of the quarry lands.
- 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).
- The licensee shall ensure that quarry signage on Highway 3 (Main Street) includes a phone number for neighbours to call if any issues should arise.
- The licensee shall ensure that all MECP standards regarding blasting, noise and dust emissions are met.

As a result of ongoing dialog with MTO, a proposed Highway 3 entrance/ exit versus one on Miller Road has been supported which will provide the opportunity to avoid conflicts between farm related traffic using Miller Road and aggregate haul trucks.

6.2.6 Mineral Aggregate Resources

Policy 4.2.8 states that:

2. *Notwithstanding the policies in subsections 4.2.1, 4.2.2, 4.2.3 and 4.2.4, within the Natural Heritage System for the Growth Plan, mineral aggregate operations and wayside pits and quarries are subject to the following:*

   a) *no new mineral aggregate operation and no new wayside pits and quarries, or any ancillary or accessory use thereto, will be permitted in the following key natural heritage features and key hydrologic features:*

i. significant wetlands;

ii. habitat of endangered species and threatened species; and

iii. significant woodlands unless the woodland is occupied by young plantation or early successional habitat, as defined by the Province, in which case, the application must demonstrate that policies 4.2.8.4 b) and c) and 4.2.8.5 c) have been addressed and that they will be met by the operation;

Response: As confirmed by the Natural Environment Level 1 and 2 Report (Appendix L), and as confirmed in the Hydrologic and Hydrogeological reports (Surface and Groundwater), (Appendix I and J), no portion of Pit 3 Extension will be located in any key natural heritage feature area nor key hydrologic feature which include significant wetlands. Numerous habitats of endangered species and threatened species were identified either on or adjacent to the subject lands, but in and in all instances, the habitat will either not be disturbed and/or will be improved through the creation of new wetland enhancement areas.

a) any application for a new mineral aggregate operation will be required to demonstrate:

i. how the connectivity between key natural heritage features and key hydrologic features will be maintained before, during, and after the extraction of mineral aggregate resources;

Response: This will include enhancing ecological linkages. Ecological linkages between the key natural heritage features in the study area will be improved as follows:

a) The area north of the existing quarry (Pit 3) and west of the northern end of the deciduous swamp shall be rehabilitated to enhance connectivity and wildlife movement between the deciduous swamp and the significant woodland located north of Second Concession Road between Carl Road and Babion Road. These two significant woodlands are separated by Second Concession Road and distance of approximately 70 metres. The area to be rehabilitated consists of a berm vegetated with terrestrial grasses and forbs and a sparsely vegetated area north of Pit 3.

b) The setback area at the north end of extraction area 3 and east of the deciduous swamp will be supplemented with additional plantings to enhance connectivity and wildlife movement opportunities between the deciduous swamp and the hedgerow located east of the site woodland located northeast of the site across Second Concession Road. This area currently consists of a cultural meadow. The establishment of a wooded area will create a corridor linking the north end of the deciduous swamp with the forested areas offsite, including the significant woodland located between Carl Road and Babion Road. These additional plantings will also enhance ecological connectivity and facilitate wildlife movement between these features. Native tree and shrub species plantings should be selected based on their suitability for the soils and moisture regime in those areas and may include: red oak, trembling aspen, eastern white cedar, red maple, basswood, bur oak, white pine, serviceberry species, gray dogwood (Cornus racemosa) and staghorn sumac (*Rhus typhina*).

ii. how the operator could replace key natural heritage features and key hydrologic features that would be lost from the site with equivalent features on another part of the site or on adjacent lands;

Response: No extraction will occur within any key natural heritage features. Extraction will occur within the key hydrologic features (Humberstone ponds) and as such, they will be lost because of the application.

- Ecological linkages between the key natural heritage features in the study area will be improved. The area north of the existing quarry (Pit 3) and west of the northern end of the deciduous swamp shall be rehabilitated to enhance connectivity and wildlife movement between the deciduous swamp and the significant woodland located north of Second

Concession Road between Carl Road and Babion Road. These two significant woodlands are separated by Second Concession Road and distance of approximately 70 metres. The area to be rehabilitated consists of a berm vegetated with terrestrial grasses and forbs and a sparsely vegetated area north of Pit 3.

- The setback area at the north end of extraction area 3 and east of the deciduous swamp will be supplemented with additional plantings to enhance connectivity and wildlife movement opportunities between the deciduous swamp and the hedgerow located east of the site woodland located northeast of the site across Second Concession Road. This area currently consists of a cultural meadow. The establishment of a wooded area will create a corridor linking the north end of the deciduous swamp with the forested areas offsite, including the significant woodland located between Carl Road and Babion Road. These additional plantings will also enhance ecological connectivity and facilitate wildlife movement between these features. Native tree and shrub species plantings should be selected based on their suitability for the soils and moisture regime in those areas and may include: red oak, trembling aspen, eastern white cedar, red maple, basswood, bur oak, white pine, serviceberry species, gray dogwood (*Cornus racemosa*) and staghorn sumac (*Rhus typhina*).
- Key hydrologic feature: Through the creation of two rehabilitation features, the key hydrologic features will be replaced;

c) During the progressive rehabilitation to create the side slopes from the top of the existing grade to the bottom of the final quarry floor, the licensee will create several wetland enhancement areas, as shown on the Site Plans. These will be pond-like depressions established at the final water level of 178.0 masl. Because the final rehabilitated lake will require numerous years to be created (quarried) and then subsequently years to naturally fill with water, to provide timely replacements for these features, the pond-like depressions will be lined with a veneer of clay to allow the retention of rain water/precipitation. The wetland enhancement areas shall be:

- Shallow wetland habitats created through the construction of submerged benches, (+/- 0.25 metres – 0.75 metres deep).
- Shallow emergent marsh vegetation to be planted in water +/- 0.15 metres deep and extends +/- 5.0 metres from the shore and be interspersed with cover structures (e.g., boulders and rood wads) in the shallow shoreline wetland areas.
- Organic material and topsoil will be added to the shoreline areas to promote shoreline vegetation and include basking logs, nesting platforms and boxes will be created for turtle, waterfowl and swallows respectfully and be designed to be suitable for snapping turtle and bullfrog breeding habitat.

d) During the ongoing extraction of the quarry, progressively, all the side slopes will be created from the bottom of the quarry floor to the top of the existing grade and range in slope from the maximum allowed by the Aggregate Resources Act being 2:1 (horizontal to vertical) to shallower slopes of 3:1 and 4:1. Once all the extraction phases are done and all the side sloping completed, the dewatering pumps will be removed and the lands will gradually be allowed to fill. The proposed lake within the Pit 3 Extension will be approximately 65 hectares, and 8.0 metres – 16.0 metres deep. Because this extraction is a continuation of the existing Pit 3 extraction, the overall lake size for both sites will total approximately 117 hectares.

Once the lake begins to naturally fill, native fish species will be introduced to the lake based on recommendations by the NPCA.

iii. how the water resource system will be protected or enhanced;

Response: Before, during and after the development of the quarry, there will be ongoing monitoring of surface water and groundwater monitors, the evaluation of the vegetation within SWD3-2 – Silver Maple Mineral Deciduous Swamp during the operational life of the quarry, and have been included onto the Site Plans, all which are enforceable by provincial staff of the Ministry of Natural Resources and Forestry.

iv. how any key natural heritage features and key hydrologic features and their associated vegetation protection zones not identified in policy 4.2.8.2 a) will be addressed in accordance with policies 4.2.8.4 b) and c) and 4.2.8.5 c); and

Response: As confirmed by the Natural Environment Level 1 and 2 Report undertaken by Golder (Appendix L), and as confirmed in the Hydrology Report (Surface and Groundwater) undertaken by Golder, (Appendix I and J), all key natural heritage features and key hydrologic features have been identified.

c) *an application requiring a new approval under the Aggregate Resources Act to expand an existing mineral aggregate operation may be permitted in the Natural Heritage System for the Growth Plan, including in key natural heritage features, key hydrologic features and any associated vegetation protection zones, only if the related decision is consistent with the PPS and satisfies the rehabilitation requirements of the policies in this subsection.*

Response: As confirmed by the Natural Environment Level 1 and 2 Report (Appendix L), the proposed Pit 3 Extension application can be extracted while protecting the key natural heritage features for the key hydrologic features, if fish are present, they will be removed prior to dewatering or destruction of the ponds. This will require a permit to collect fish for from MNRF and be obtained prior to relocation to avoid contravention of the Fisheries Act. Any native fish present are to be relocated to suitable nearby habitat and non-native fish are to be euthanized. In addition, the progressive and final rehabilitation of the lands will introduce new and enhanced opportunities for these features. The application also is also consistent with the PPS and satisfies the rehabilitation requirements as noted above in Section 6.1.

3. *In prime agricultural areas, applications for new mineral aggregate operations will be supported by an agricultural impact assessment and, where possible, will seek to maintain or improve connectivity of the Agricultural System.*

Response:

a) The subject lands are mapped as Prime Agricultural Area as part of the Provincial Agricultural System under the Growth Plan.

b) The City of Port Colborne Official Plan, Policy 3.5 specifies that all lands identified on Schedule A as 'Agricultural' are deemed to be Prime Agricultural Areas. Furthermore, we confirm that the subject lands are identified as Agricultural by Schedule A, and therefore, the preparation of an Agricultural Impact Assessment is a requirement of the Growth Plan. A copy of the Agricultural Impact Assessment is included herein as Appendix C.

In terms of the application ensuring that there will be improved and/or maintained connectivity to the Agricultural System, the AIA provided numerous recommendations all which have been incorporated into the Site Plans.

4. For rehabilitation of new mineral aggregate operation sites, the following apply:

a) the disturbed area of a site will be rehabilitated to a state of equal or greater ecological value and, for the entire site, long-term ecological integrity will be maintained or enhanced;

Response: The existing land use of the extraction area is primarily agriculture, with the only exception being the woodlot referenced FOD7-2 – Fresh-Moist Ash Lowland Deciduous Forest. As confirmed by the Tree Preservation Plan (attached hereto as Appendix P), this woodlot is

being recommended for removal (including Vegetation Units 'A', 'B', and 'C'), based on the presence of Emerald Ash Borer damage, high occurrence of Ash trees, pioneer species and possible restoration plantings, within the study area as well as the relatively young age of the trees present on site contribute to a low preservation priority for the FOD7-2 feature.

Therefore, the agricultural lands and the FOD7-2 woodlot will be replaced by the following;

i) During the progressive rehabilitation, the creation of several wetland enhancement areas. These will be pond-like depressions will be established at the final water level of 178.0 masl and lined with a veneer of clay to allow the retention of rain water/precipitation. The wetland enhancement areas shall be:

- Shallow wetland habitats created through the construction of submerged benches (+/- 0.25 metres – 0.75 metres deep).
- Shallow emergent marsh vegetation to be planted in water +/- 0.15 metres deep and extend +/- 5.0 metres from the shore and be interspersed with cover structures (e.g., boulders and rood wads) in the shallow shoreline wetland areas,
- Organic material and topsoil will be added to the shoreline areas to promote shoreline vegetation and include basking logs, nesting platforms and boxes will be created for turtle, waterfowl and swallows respectfully and be designed to be suitable for snapping turtle and bullfrog breeding habitat.

ii) During the ongoing extraction of the quarry, progressively, all the side slopes will be created from the top of the existing grade to the bottom of the final quarry floor and range in slope from the maximum allowed by the Aggregate Resources Act being 2:1 (horizontal to vertical) to shallower slopes of 3:1 and 4:1. Once all the extraction phases are done and all side sloping completed, the dewatering pumps will be removed and the lands will gradually be allowed to fill. The proposed lake within the Pit 3 Extension will be approximately 65 hectares and 8.0 metres – 16.0 metres deep. Because this extraction is a continuation of the existing Pit 3 extraction, the overall lake size for both sites will total approximately 117 hectares. Once the lake begins to naturally fill, native fish species will be introduced to the lake.

iii) Along the perimeter of the site, and specifically within the extraction setback areas, and once the perimeter berms have been removed, the lands will be subject to natural succession. This will encourage the growth of numerous ecological linkages along the perimeter of the lake and property boundaries.

iv) Bisecting SWD3-2 – Silver Maple Mineral Deciduous Swamp is the former Carl Road alignment. The segment of Carl Road that bisects the deciduous swamp shall be rehabilitated following the decommissioning of the road. This linear disturbance has enabled invasive plants to infiltrate the swamp interior and may be increasing predation pressure on wildlife from domestic and feral animals (cats and dogs) as well as opportunistic wild predators and scavengers that benefit from anthropogenic disturbance such as coyotes or raccoons. Excavations in three or four areas along the length of the road should be created to improve surface water drainage. Plantings along this segment of Carl Road should include the dominant tree and shrub species found in the deciduous swamp including silver maple, pine oak, swamp white oak, bur oak, red maple, and spicebush. Invasive shrub species including multiflora rose, common buckthorn, and Tartarian honeysuckle have become established in this area and may prevent the successful establishment of the native plantings. These invasive shrubs should be removed prior to the planting of Carl Road.

As confirmed by the Natural Environment Level 1 and 2 Assessment (Appendix L) the disturbed area of a site will be rehabilitated to a state of equal or greater

ecological value and, for the entire site, long-term ecological integrity will be maintained or enhanced.

b) if there are key natural heritage features or key hydrologic features on the site, or if such features existed on the site at the time of the application:

i. the health, diversity, and size of these key natural heritage features and key hydrologic features will be maintained or enhanced; and

ii. any permitted extraction of mineral aggregate resources that occurs in a feature will be completed, and the area will be rehabilitated, as early as possible in the life of the operation;

Response: As confirmed by the Hydrology Assessment (Appendix I) and Hydrogeological Assessment (Appendix J) and the Natural Environment Level 1 and 2 Assessment (Appendix L) the key natural heritage features and key hydrologic features have been identified and evaluated.

As well, within the key hydrologic feature, if fish are present, they will be removed prior to dewatering or destruction of the ponds. This will require a permit to collect fish for from MNRF and be obtained prior to relocation to avoid contravention of the Fisheries Act. Any native fish present are to be relocated to suitable nearby habitat and non-native fish are to be euthanized.

To ensure that any permitted extraction of mineral aggregate resource that occurs in a feature will be completed, and the area will be rehabilitated, as early as possible in the life of the operation, during the progressive rehabilitation, the creation of several wetland enhancement areas. These will be pond-like depressions will be established at the final water level of 178.0 masl and lined with a veneer of clay to allow the retention of rain water/precipitation. Subsoil and topsoil will be replaced around the pond edges and native aquatic and riparian plants will be planted around the perimeter to initiate a wetland habitat and accommodate any possible local fish species. The wetland enhancement areas shall be:

- Shallow wetland habitats created through the construction of submerged benches, (+/- 0.25 metres – 0.75 metres deep).
- Shallow emergent marsh vegetation to be planted in water +/- 0.15 metres deep and extend +/- 5.0 metres from the shore and be interspersed with cover structures (e.g., boulders and rood wads) in the shallow shoreline wetland areas.
- Organic material and topsoil will be added to the shoreline areas to promote shoreline vegetation and include basking logs, nesting platforms and boxes will be created for turtle, waterfowl and swallows respectfully and be designed to be suitable for snapping turtle and bullfrog breeding habitat.

c) aquatic areas remaining after extraction are to be rehabilitated to aquatic enhancement, which will be representative of the natural ecosystem in that particular setting or ecodistrict, and the combined terrestrial and aquatic rehabilitation will meet the intent of policy 4.2.8.4 b); and

Response: In addition, the Natural Environment Level 1 and 2 Assessment (Appendix L), has confirmed that these aquatic enhancements are representative of the natural ecosystem that the subject lands are within, specifically 7E-5: Niagara Ecodistrict, and that the combined terrestrial and aquatic rehabilitation has met the intent of policy 4.2.8.4 b) as noted above.

d) outside the Natural Heritage System for the Growth Plan, and except as provided in policies 4.2.8.4 a), b) and c), final rehabilitation will appropriately reflect the long-term land use of the general area, taking into account applicable policies of this Plan and, to the extent permitted under this Plan, existing municipal and provincial policies. In prime agricultural areas, the site will be rehabilitated in accordance with policy 2.5.4 of the PPS, 2014.

Response: Final rehabilitation will be the creation of a lake. This land use reflects the long-term land use of the Pit 3 lands which abut to the west and for which will be create a common lake totaling approximately 117 hectares in size. In addition, the lands west of Babion Road (Pit 2 lands) are also currently licensed with the requirement to be rehabilitated to a lake, being +/-50 hectares.

Furthermore, those lands outside the limit of extraction (1252 and 1326 Main Street) will continue to be available for agriculture prior to, during and after extraction is complete, as part of the overall final rehabilitation design and therefore in accordance with Policy 2.5.4 of the PPS (2020).

5. *Final rehabilitation for new mineral aggregate operations in the Natural Heritage System for the Growth Plan will meet these additional criteria:*

    b) *where there is extraction below the water table, no less than 35 per cent of the non-aquatic portion of the land subject to each licence in the Natural Heritage System for the Growth Plan is to be rehabilitated to forest cover, which will be representative of the natural ecosystem in that particular setting or ecodistrict. If the site is also in a prime agricultural area, the remainder of the land subject to the licence is to be rehabilitated in accordance with policy 2.5.4 of the PPS, 2014; and*

Response: The lands to be licensed total 106.3 hectares. The proposed lake and associated side slopes up to the pre-extraction grade will total 71.1 hectares (Limit of Extraction). The balance of the land is 35.2 hectares of which 35% equates to 10.5 hectares. Except for the +/-7.0 hectares, corresponding to 1252 and 1326 Main Street which will continue to be available for agriculture and in accordance with policy 2.5.4 of the PPS, the balance of the lands (28.2 hectares) will be retained or rehabilitated to forest cover, which will be representative of the natural ecosystem in the particular setting or ecodistrict.

    c) rehabilitation will be implemented so that the connectivity of the key natural heritage features and the key hydrologic features on the site and on adjacent lands will be maintained or enhanced. 6. Except as provided by the policies of this subsection, decisions on planning matters must be consistent with the policies in the PPS that pertain to the management of mineral aggregate resources.

Response: The Site Plans have been designed so that rehabilitation will be implemented ensuring the connectivity of the key natural heritage features will be enhanced. Ecological linkages between the key natural heritage features in the study area will be improved. The area north of the existing quarry (Pit 3) and west of the northern end of the deciduous swamp shall be rehabilitated to enhance connectivity and wildlife movement between the deciduous swamp and the significant woodland located north of Second Concession Road between Carl Road and Babion Road. These two significant woodlands are separated by Second Concession Road and distance of approximately 70 metres. The area to be rehabilitated consists of a berm vegetated with terrestrial grasses and forbs and a sparsely vegetated area north of Pit 3.

The setback area at the north end of extraction area 3 and east of the deciduous swamp will be supplemented with additional plantings to enhance connectivity and wildlife movement opportunities between the deciduous swamp and the hedgerow located east of the site woodland located northeast of the site across Second Concession Road. This area currently consists of a cultural meadow. The establishment of a wooded area will create a corridor linking the north end of the deciduous swamp with the forested areas offsite, including the significant woodland located between Carl Road and Babion Road. These additional plantings will also enhance ecological connectivity and facilitate wildlife movement between these features. Native tree and shrub species plantings should be selected based on their suitability for the soils and moisture regime in those areas.

The key hydrologic features, if fish are present within the shallow ponds within the existing Humberstone Speedway, will be removed, but through the creation of wetland enhancement areas and the proposed final 65 hectare lake, the key hydrologic habitat will be enhanced.

Furthermore, refer to our responses in Section 6.1.5 regarding PPS 2.5.4.

6.2.7 Summary of the Growth Plan Policies

As part of the planning review for the Pit 3 Extension, and as stated in Section 5.2.1 (1) under General Interpretation of the Growth Plan for the Greater Golden Horseshoe 2014, "*The policies and schedules of this Plan should be read in a manner that recognizes this Plan as an integrated policy framework".*

Based on this approach, Growth Plan was read in its entirety and the relevant policies were applied including;

- Policy 3.2.7 Stormwater Management
  - 3.2.7 a) b) c) d)
- Policy 4.2.2 Natural Heritage System
  - 4.2.2 3 a i) ii) iii) iv)
  - 4.2.2.3 b
- Policy 4.2.3 Key Hydrologic Features, Key Hydrologic Areas and Key Natural Heritage Features
  - 4.2.3 1 d)
  - 4.2.3 2 a) b) c)
- Policy 4.2.4 Lands Adjacent to Key Hydrologic Features and Key Natural Heritage Features
  - 4.2.4 1 a) b) c)
  - 4.2.4. 2
  - 4.2.4 3
- Policy 4.2.6 Agricultural System
  - 4.2.6 2
  - 4.2.6 3
  - 4.2.6 4
  - 4.2.6 5
  - 4.2.6 6
- Policy 4.2.8 Mineral Aggregate Resources
  - 4.2.8 2a i) ii) iii)
  - 4.2.8 2b i) ii) iii) iv)
  - 4.2.8 2c
  - 4.2.8 3
  - 4.2.8 4 a) b) c) d)
  - 4.2.8 5 b) c)

Based on the above review, it is our opinion that the Pit 3 Extension and specifically the Site Plans, which have been designed based on the recommendations from the numerous technical studies; are consistent with the goals and objectives of the above noted policies of the Growth Plan.

6.3 Other Provincial Plans

6.3.1 Greenbelt Plan (2017) / Niagara Escarpment Plan (2017)

For completeness and to highlight that there has been no oversight, we confirm that the subject lands are not encompassed within the planning boundaries of either the Greenbelt Plan or Niagara Escarpment Plan.

6.4 Niagara Region Official Plan (2014)

Policy 14.C.1 of the Region of Niagara Official Plan (ROP) states that "*When reading and interpreting this Plan, the objectives and policies should be read in their entirety*". Based on this, and through the Pre-Submission Consultation process, the relevant policies of the ROP are focused on:

- Policy 5.B – Agriculture
- Policy 6.C – Mineral Resources
- Policy 7.A.2.6 - Stormwater Management
- Policy 7.B Core Natural Heritage System
- Policy 9.H.3 Major Goods Movement Facilities and Corridors
- Policy 14.D.5 - Implementation (Financial Impact Assessment / Economic Benefits).

6.4.1 Agriculture

The subject lands are designated as *Good General Agriculture Area* as shown on Schedule A – Regional Structure and Schedule B: Agricultural Land Base, of the Regional Official Plan (**ROP**). The *Good General Agriculture Area* includes "*organic soils, areas of Classes 1 and 2 lands, areas of 60 to 70 percent Class 1 and 2 lands, and the majority of Class 3 lands*." This designation has been identified using Canada Land Inventory: Soil Capability for Agriculture and in consultation with local agriculturalists.

Policy 5.B.5 states that:

> *Changes to the Good General Agricultural Areas and Rural Areas on Schedule B will be made only after consultation with the local municipalities, agricultural representatives and interested local and Provincial agencies and organizations and will be done through a Regional Official Plan amendment. Revisions to the Greenbelt Plan and to the Niagara Escarpment Plan boundaries and the redesignation of Unique Agricultural Areas are prohibited.*

Response: It is confirmed that PCQ is requesting a re-designation from the Good General Agricultural Areas and Rural Areas on Schedule B to 'Licensed Pits and Quarries' on Schedule D. As such, we confirm that PCQ has undertaken consultation with the local municipalities, agricultural representatives and interested local and Provincial agencies and organizations and that they have applied for a Regional Official Plan amendment.

Policy 5.B.7 provides specific direction on the criteria to be used to support the re-designation of agricultural lands. Table 1 below provides each policy requirement along with confirmation of how each criteria has been addressed by the subject application.

Policy 5.B.7 states that:

> *Non-agricultural uses should not be located in Agricultural Areas. The introduction of new non-agricultural development of all types into the Agricultural Areas has an adverse impact on the agricultural and natural resources and shall be strictly limited. However, applications for individual non-agricultural uses may be considered. These applications will be reviewed through a Regional Official Plan Amendment subject to the following conditions:*

TABLE 1 – REGIONAL OFFICIAL PLAN 2031 POLICY FULFILLMENT POLICY 5.B.7 - CONVERSION OF AGRICULTURAL LANDS	
Policy 5.B.7	**Commentary**

a) Non-agricultural uses are not permitted in Unique Agricultural Areas - Good Tender Fruit and Good Grape Areas.	The subject lands do not contain any Unique Agricultural Areas – Good Tender Fruit and Good Grape Areas, therefore this is OP policy is not applicable to the subject application.
b) Non-farm residential lots and uses are not permitted in Good General Agricultural Areas or in Rural Areas in close proximity to agricultural activity.	The subject application does not propose any non-farm residential lots or uses, therefore this OP policy is not applicable to the subject application. The two non-farm residential lots with frontage onto Highway 3 will remain zoned agriculture.
c) A demonstrated need for additional land to be designated within the municipality and the desirability of the proposed use to the community.	We confirm that PPS Policy 2.5.2.1 specifies that the applicant does not require demonstration of need for *mineral aggregate resources*, including any type of supply/demand analysis, notwithstanding the availability, designation or licensing for extraction of *mineral aggregate resources* locally or elsewhere.
d) There are no reasonable alternatives in Rural Areas or in Urban Areas.	Refer to our response under PPS 2.5.4.1 c) regarding alternative lands assessment within Rural Areas and in Urban Areas.
e) There are no reasonable alternative locations in other Good General Agricultural Areas with lower priority agricultural land.	Refer to our response under PPS 2.5.4.1 c) regarding alternative lands assessment within Rural Areas and in Urban Areas.
f) The degree of conflict with surrounding agricultural uses. Any conflict should be mitigated to the extent feasible. This would depend on the size and nature of the proposed use, the existing agricultural uses, and on any buffering factors between them. For example, creeks, roadways and other prominent features would be helpful in defining and screening a non-agricultural use from surrounding farms;	The AIA (Appendix C) provides recommendations that are intended to address potential conflicts with surrounding agricultural uses and these have been incorporated into the Site Plans.
g) Compliance with policies contained in Chapters 6 and 7, Environmental Policies including the Natural Heritage and Aggregate Resource Policies.	Refer to policy conformity below for response on how Environmental Policies including Natural Heritage and Aggregate Resource Policies have been fulfilled.
h) Applications must be supported by adequate technical assessment to ensure that private water supply and private sewage services can be provided.	PCQ will not utilize any municipal utilities (water or sanitary sewage). Initially, the aggregate from the proposed Pit 3 will be trucked to the existing processing facility (within Pit 1.) which currently already operates on an approved MECP - PTTW for the wash plant, water trucks for dust mitigation etc. As well, the existing administration offices utilize a private septic system. These facilities will continue to be utilized during the initial operation of Pit 3 Extension (i.e., Phase 1). The Hydrogeology Assessment (Appendix J), has confirmed that there is adequate groundwater to support the future aggregate processing operation (i.e., wash plant), and any other related needs of the operation (i.e., dust mitigation). The siting of a future administration office at the new quarry access will be serviced by a water supply that is comparable to or less than a typical household.

i)	Compliance with other policies contained in the Regional Official Plan.	It is our opinion that the subject application is in compliance with all other Regional OP policies.

6.4.2 Mineral Resources

Policy 6.C.4 regarding the development of adjacent lands to licensed pits/quarries, states that:

Only those uses permitted under Chapter 5.B, Policies for Agriculture, and Niagara Escarpment Plan policies within the Niagara Escarpment Plan area, should be considered for areas adjacent to either licensed pits or quarries or possible aggregate areas which are outside the urban areas boundaries of local municipalities as shown in this Plan.

Also, in areas adjacent to or in known deposits of mineral aggregate resources, development and activities which would preclude or hinder the establishment of new operations or the expansion of existing operations or access to the resources shall only be permitted if:

a) Resource use would not be feasible; or

b) The proposed land use or development serves a greater long-term public interest; and

c) Issues of public health, public safety and environmental impact are addressed.

Response: The preceding section (6.4.1) confirms that the Pit 3 Extension proposed land use of quarry extraction meets the criteria noted under Chapter 5.B.

Policy 6.C.5 states that:

> *Applications for licenses to open new pits or quarries and applications for changes to or expansions of existing licensed pits or quarries will be considered in relationship to the Niagara Escarpment Plan policies within the Niagara Escarpment Plan area and to the following conditions:*

The subject lands are not located within the Niagara Escarpment Plan area and further to communication with the Region's Planning Department (S. Norman dated May 20, 2020) this portion of the Policy is not applicable to the PCQ application.

Policy 6.C.5 (Continued):

e) compliance with the provisions of other policies in this Plan including Policies 7.B.1.31 to 7.B.1.34 inclusive in Chapter 7 of this Plan;

b) compatibility with surrounding land uses;

c) the impact on the natural environment including surface watercourses and Groundwater;

d) the proposed manner of operation, site plan, and rehabilitation;

e) the proposed haulage roads and the possible effect on the roads concerned and on adjacent development.

Response: With regard to the above:

- ROP policies 7.B.31 to 7.B.34 are only applicable to lands sited within the Greenbelt Natural Heritage System and the subject lands are not located within the Greenbelt Natural Heritage System.
- In support of the application, PCQ retained experts to identify potential land use impacts and to provide recommendations in how PCQ can operate the proposed extraction operation in a manner which minimizes social, economic and environmental impacts. The recommendations from the following reports have been incorporated into the Site Plans:
  - Acoustical (Noise) Impact Study
  - Agriculture Impact Assessment
  - Air Quality (Dust) Report

- Archaeology Assessment
- Blasting (Vibration) Impact Assessment
- Cultural Heritage Screening Report
- Hydrology (Surface and Groundwater)
- Natural Environment Level 1 and 2 Report (EIS)
- Traffic Impact Study

In addition:

- A comprehensive Land Use Compatibility / Sensitive Land Use Study was completed to provide a synthesis of all the specific impacts and to assess and summarize the recommendations specifically from the noise, air quality and blasting reports.
- A comprehensive Social Impact Assessment was completed to review all the land use compatibility issues and assess that resulting recommendations to ensure that specifically, social impacts would be minimized.

- The impact on the natural environment including surface watercourses and Groundwater has been assessed in the following documents:
  - Hydrology Assessment attached hereto as Appendix I.
  - Hydrogeological Assessment attached hereto as Appendix J.
  - Natural Environment Level 1 & 2 Report (EIS), attached hereto as Appendix L.

  Furthermore, there was co-operation of information and findings during the preparation of these specific reports and therefore the reports were not prepared in isolation, but the recommendations are based on a collaborative approach.
- The proposed manner of operation, site plan, and rehabilitation are detailed most importantly on the Site Plans as those are the required tool used by MNRF to ensure that the operation is enforced. As well, a description of the rehabilitation is contained herein and in the Rehabilitation Strategy report attached hereto as Appendix M.
- The proposed haulage roads and the possible effect on the roads concerned and on adjacent development have been addressed in the Traffic Impact Study. Through the utilization of a Highway 3 entrance/exit will be significant to minimizing conflicts with users of the local roads.

Policy 6.C.8 states that:

In the case of adjacent pit or quarry operations, the Region will, wherever practical, encourage the removal of all economically viable material between the pits, and encourage continuous and harmonious rehabilitation.

Response:

i) "*encourage the removal of all economically viable material between pits*"

PCQ owns and operates the abutting quarry (Pit 3) and the submitted Site Plans (Operational Plan: - Sheet 3 of 8) , illustrates that the existing eastern quarry face of Pit 3 will be continued and worked into the Pit 3 Extension lands. As such, the prescribed combined 30.0 metre setback (15.0 metres on each side) will be able to be excavated. Furthermore, in advance of submitting for the proposed Licence and planning approvals, and in conjunction with PCQ's purchase of the numerous landholdings associated with the Pit 3 Extension, they also negotiated with the City of Port Colborne to purchase the Carl Road right-of-way. Through the acquisition of these lands, PCQ can both: i) access the aggregate underlying the right-of-way, and also, ii) all the aggregate that might have been sterilized within the prescribed 30.0 metre setbacks that would have paralleled the right-of-way.

ii) "*and encourage continuous and harmonious rehabilitation*"

The approved Site Plans for the existing Pit 2 and Pit 3 licenses, (ARA Licence 4444) includes a Progressive and Final Rehabilitation Plan (Sheet 5 of 6) which establishes the requirements and details of how the rehabilitation will be carried out.

Specifically,

Pit 2: Firstly, PCQ Inc. is actively looking to undertake further but limited extraction within Pit 2. This extraction will be very focused and limited to the northwest corner of the site - north of the haul road and is anticipated to be initiated in 2022 and take 1 to 2 years to complete.

Second, although there is a sizeable volume of known resources (+/-1 million tonnes) in the northeast corner of the site, the aggregate is buried beneath overburden placed by the previous owner and PCQ Inc. has determined that it is economically unfeasible to retrieve.

Third, PCQ acknowledges that additional site rehabilitation is necessary south of the haul road that traverses the site. This includes additional side sloping on the east and west quarry walls. PCQ Inc. has a developed a short-term, medium-term work plan to address these deficiencies but concurrently has been actively pursing a site meeting with the local NDMNRF staff (Aggregate Technical Specialist) to attend the site to ensure that such rehabilitation efforts are consistent with the Ministry's objectives. The progressive rehabilitation has also been depicted in the updated Comprehensive Rehabilitation Strategy report.

Fourth, NDMNRF staff from the Guelph office (Aggregate Technical Specialist) have the enforcement responsibility to ensure the operation is being carried out as per the approved Site Plans including progressive rehabilitation.

Pit 3: Firstly, PCQ Inc. continues to actively extract the southern portion of the Pit 3 lands.

Second, PCQ continues to progressively rehabilitate portions of the eastern and the northern side slopes to meet ARA / Site Plan standards and are on-target with their required rehabilitation efforts.

Third, NDMNRF staff from the Guelph office (Aggregate Technical Specialist) have the enforcement responsibility to ensure the operation is being carried out as per the approved Site Plans including progressive rehabilitation.

Forth, PCQ Inc. will be submitting a Site Plan Amendment request to MDMNRF (Integrated Aggregate Operations Section) in Peterborough for numerous minor changes which have been triggered due to the Pit 3 Extension application. Of note, one change will be the deletion of the requirement to backfill (3:1 slope) the eastern slope where it corresponds with the Pit 3 Extension lands since the open extraction will extend eastward. Conversely, the revised Site Plans will illustrate the requirement for the backfilling to smoothly extend (harmoniously) into the proposed quarry expansion.

Pit 3 Extension: The Site Plans illustrate how the Pit 3 extension lands will smoothly extend (harmoniously) with the Pit 3 licence.

Final rehabilitation will be the creation of a lake. This land use reflects the long-term land use of the Pit 3 lands which abut to the west and for which will be created a common lake totaling approximately 117 hectares in size. In additional, the lands west of Babion Road (Pit 2 lands) are also currently licensed with the requirement to be rehabilitated to a lake, being +/-50 hectares.

Policy 6.C.13 states that:

> *Where a new pit or quarry or an extension to an existing licensed pit or quarry are to be located outside a possible aggregate area, an amendment to this Plan is required.*

Response: It is acknowledged that the Pit 3 extension lands are not shown on Schedule D4 (Mineral Aggregates) as a Licensed Pits and Quarries nor as a Possible Aggregate Area. Therefore an amendment to the Regional Official Plan (ROPA) is necessary to undertake the following:

- Add to Section 13 the site-specific policies to permit the Pit 3 extension quarry operation.
- Identify the subject lands on Schedule D4 - *Mineral Resources* as a Licensed Pits and Quarries.

6.4.3 Stormwater Management

Policy 7.A.2.6 states that:

> *A stormwater management plan and a sediment and erosion control plan shall not be required for a new mineral aggregate operation or an expansion to an existing operation where these matters are adequately addressed through studies prepared to meet the require*

The external portion of the subject lands will have variable setbacks between the abutting lands/roads and the extraction as prescribed by the ARA which and/or recommendations from the technical reports and vary from 15.0 metres to 250.0 metres. Within all external setbacks will be constructed a noise/visual/dust mitigation berm. The extraction activity within the Limits of Extraction will result in the removal of aggregates and therefore, a process to lower the existing site grades. Consequently, combined with the i) setback, ii) physical berm barrier and iii) deepening of the subject lands, all surface water that is captured on the site will be retained within the site. Therefore, there will be no alteration to any existing external roadway ditching, nor any significant increase in the surface water being directed to it.

Given that the quarry operation will be undertaken through a dewatering process with a dry floor, all surface water that does collect on the expanding and open quarry floor will be directed to the dewatering pumps and discharged from the site via the Wignell Drain.

6.4.4 Natural Environment

Policy 7.B.1.6 regarding Key Hydrologic Features, states that:

> *Key hydrologic features include permanent and intermittent streams, lakes and their littoral zones, seepage areas, springs and wetlands. When key hydrologic features are identified through watershed or other studies the Region will consider an amendment to this Plan to show those features on a Schedule. In the interim, within the Greenbelt Area, if potentially permitted development is proposed in an area within the Unique Agricultural Areas where key hydrologic features have not been identified, the applicant may be required to identify the hydrologic features on the site of the proposed development as well as within 120 meters of the site boundary.*

Response: The ponds within the former Humberstone Speedway may contain fish and as such, would represent a key hydrologic feature. If fish are present, the Licensee will need to remove the fish prior to dewatering or destruction of the ponds. This will require a permit to collect fish for from MNRF and be obtained prior to relocation to avoid contravention of the Fisheries Act. Any native fish present are to be relocated to suitable nearby habitat and non-native fish are to be euthanized.

Policy 7.B.1.8 regarding Environmental Features or Function, states that:

> *Where, through the review of a planning application, it is found that there are important environmental features or functions that have not been adequately evaluated, the applicant shall have an evaluation prepared by a qualified biologist in consultation with the Region,*

the local municipality and, where appropriate, the Ministry of Natural Resources and the Niagara Peninsula Conservation Authority. If the evaluation finds one or more natural heritage features meeting the criteria for identification as Core Natural Heritage System components, the appropriate Core Natural Heritage System policies shall apply.

Response: It was confirmed by The Hydrology Assessment (Appendix I), Hydrogeological Assessment (Appendix J) and the Natural Environment Level 1 and 2 Report (EIS), attached hereto as Appendix L that there are no important environmental features or functions that have identified which have not been adequately evaluated. As part of the evaluation, no natural heritage features meeting the criteria for identification as Core Natural Heritage System were identified.

Policy 7.B.1.10 regarding Vegetation Protection Zones, states that:

Notwithstanding Policies 7.B.1.15 and 7.B.1.20 and the Policies in Chapter 7.A.2, within Environmental Protection Areas, within Fish Habitat in the Greenbelt Natural Heritage System, within key hydrologic features within the Unique Agricultural Areas, and within any associated vegetation protection zones in the Greenbelt Area, development and site alteration shall not be permitted except for the following:

a) forest, fish and wildlife management;

b) conservation and flood or erosion control projects where it has been demonstrated that they are necessary in the public interest and other alternatives are not available; and

c) small scale, passive recreational uses and accessory uses such as trails, boardwalks, footbridges, fences, docks and picnic facilities that will have no significant negative impact on natural features or ecological functions of the Core Natural Heritage System.

Where such uses are proposed, the proponent shall be required to prepare an Environmental Impact Study (EIS) to the satisfaction of the Region in accordance with Policies 7.B.2.1 to 7.B.2.5.

Response: The subject lands are not within Environmental Protection Areas, within Fish Habitat in the Greenbelt Natural Heritage System, within key hydrologic features within the Unique Agricultural Areas, and within any associated vegetation protection zones in the Greenbelt Area.

Policy 7.B.1.13 regarding Natural Heritage Corridor, states that:

Where development or site alteration is proposed in or near a Potential Natural Heritage Corridor the Corridor shall be considered in the development review process. Development should be located, designed and constructed to maintain and, where possible, enhance the ecological functions of the Corridor in linking Core Natural Areas or an alternative corridor should be developed. The Potential Natural Heritage Corridors are illustrated conceptually on Schedule C. The Region shall undertake a study to further define Corridors within the Core Natural Heritage System.

Response: The subject lands and specifically the SWD3-2 Silver Maple Mineral Deciduous Swamp are defined as being part of the Core Natural Heritage System but not a Potential Natural Heritage Corridor. Notwithstanding, the Pit 3 Extension has been designed and constructed to maintain and, where possible, enhance the ecological functions of this feature by;

- Creating a range of new ecological habitat both south and east of the woodlot including the post extractive 65 hectare lake being 8.0 metres – 16.0 metres deep.
- Wetland enhancement areas the fringe of the lake.
- Setback areas proposed to be subject to natural succession.
- The natural succession of the former Carl Road right of way.

Policy 7.B.1.15 regarding Fish Habitat, states that:

> *Within Fish Habitat as identified on Schedule C, or adjacent lands as specified in Table 7-1, development and site alteration may be permitted if it will result in no net loss of the productive capacity of fish habitat as determined by the Department of Fisheries and Oceans or its designate. The proponent shall be required to prepare an Environmental Impact Study (EIS) to the satisfaction of the Department of Fisheries and Oceans, or its designate, in accordance with Policies 7.B.2.1 to 7.B.2.5.*

Response: The ponds within the former Humberstone Speedway may contain fish and as such, would be fish habitat. If fish are present, the Licensee will remove the fish prior to dewatering or destruction of the ponds. This will require a permit to collect fish for from MNRF and be obtained prior to relocation to avoid contravention of the Fisheries Act. Any native fish present are to be relocated to suitable nearby habitat and non-native fish are to be euthanized.

Policy 7.B.1.16 regarding Municipal Drains, states that:

> The Region recognizes that the primary function of the Municipal Drains shown on Schedule C is to provide drainage for agricultural lands. These drains also may be used to convey irrigation water for agricultural use. The Region supports ongoing drain maintenance in accordance with the Federal Department of Fisheries and Oceans' Class Authorization System for Agricultural Municipal Drains. Where development, site alteration or building is proposed adjacent to a Municipal Drain a buffer zone a minimum 15 metres in width measured from the stable top of bank shall be required to provide access for drain maintenance, protect the integrity of the drains and protect environmental health. A narrower buffer may be permitted where it has been demonstrated to the satisfaction of the local municipality and the Niagara Peninsula Conservation Authority that there will not be a significant negative impact on the maintenance and functioning of the drain.
>
> In addition, the Wignell Drain bisects the 'eastern arm' of the subject lands which encompass part of the proposed Phase 1. Although a portion Wignell Drain is being proposed to be re-aligned through the City of Port Colborne – Drainage Act process, the portion that bisects the 'eastern arm' is not included in the current process. Where the Wignell Drain bisects the site (within Phase 1 near Miller Road), PCQ Inc. has had several discussions with the City and their Drainage Engineer and they support the concept of a temporary relocation of the Wignell Drain. Practically, once the extraction within Phase 1 has proceed eastwardly to be in proximity to the Wignell Drain, a series of operational actions will occur, generally as follows:
>
> - Construction of a temporary Wignell Drain around the property limits of the 'eastern arm',
> - Excavation of the rock (Phase 1b) will commence,
> - Backfilling ½ to 2/3 of the eastern arm to an elevation necessary to support the positive flow of the Wignell Drain,
> - Relocating the Wignell Drain back generally it's original location,
> - Creation of suitable fish habitat within the ditch and side slopes to provide a condition of aquatic habitat enhanced relative to its existing condition.
>
> For PCQ Inc. to facilitate the completion of the Wignell Drain relocation quickly and provide a sufficient monitoring duration of the rehabilitation / aquatic habitat efforts, initial extraction of Phase 1 will focus on moving toward this portion of the site as soon as possible.

Response: The west branch of the Wignell Drain and the east branch of the Wignell Drain, (formerly the Michener Drain) are part of a drainage system managed by the City of Port Colborne under the Drainage Act. The City is preparing formal engineering drawings to oversee the realignment of the east branch of the Wignell Drain. Once that alignment is finalized, and specifically pertaining to the east-tab, the Licensee will be able to comment on the possibility of narrower buffers be permitted, where it has been demonstrated to the satisfaction of the local

municipality and the Niagara Peninsula Conservation Authority that there will not be a significant negative impact on the maintenance and functioning of the drain.

Policy 7.B.1.19 regarding Core Natural Features (Tree Saving Plan), states that:

> *Where development or site alteration is approved within the Core Natural Heritage System or adjacent lands as set out in Table 7-1 the applicant shall submit a Tree Saving Plan maintaining or enhancing the remaining natural features and ecological functions. The Plan shall be prepared in accordance with the Regional Forest Conservation By-Law and the local tree conservation By-Law as appropriate and its implementation monitored by a member of the Ontario Professional Forestry Association.*

Response: Because the woodlot SWD3-2 – Silver Maple Mineral Deciduous Swamp is part of the Core Natural Heritage System, and since the applicant proposes to remove the FOD7-2 Fresh-Moist Ash Lowland Deciduous Forest vegetation, a Tree Preservation Plan is required. A Tree Preservation Plan has been completed and is attached hereto as Appendix P. The report concluded that trees located within FOD7-2, (including Vegetation Units 'A', 'B', and 'C') recommend removal to permit the Phase 2 extraction work of the proposed quarry expansion. The presence of Emerald Ash Borer damage, high occurrence of Ash trees, pioneer species and possible restoration plantings, within the study area as well as the relatively young age of the trees present on site contribute to a low preservation priority for the FOD7-2 feature.

Notwithstanding the justification for the removal of FOD7-2 woodlot and the agricultural fields, no other identified vegetation from the site will be removed and therefore maintaining the natural features and ecological functions. The enhancement of the remaining natural features and ecological functions will be undertaken by:

- Ecological linkages between the key natural heritage features in the study area will be improved. The area north of the existing quarry (Pit 3) and west of the northern end of the deciduous swamp shall be rehabilitated to enhance connectivity and wildlife movement between the deciduous swamp and the significant woodland located north of Second Concession Road between Carl Road and Babion Road. These two significant woodlands are separated by Second Concession Road and distance of approximately 70 metres. The area to be rehabilitated consists of a berm vegetated with terrestrial grasses and forbs and a sparsely vegetated area north of Pit 3.
- The setback area at the north end of extraction area 3 and east of the deciduous swamp will be supplemented with additional plantings to enhance connectivity and wildlife movement opportunities between the deciduous swamp and the hedgerow located east of the site woodland located northeast of the site across Second Concession Road. This area currently consists of a cultural meadow. The establishment of a wooded area will create a corridor linking the north end of the deciduous swamp with the forested areas offsite, including the significant woodland located between Carl Road and Babion Road. These additional plantings will also enhance ecological connectivity and facilitate wildlife movement between these features. Native tree and shrub species plantings should be selected based on their suitability for the soils and moisture regime in those areas and may include: red oak, trembling aspen, eastern white cedar, red maple, basswood, bur oak, white pine, serviceberry species, gray dogwood (*Cornus racemosa*) and staghorn sumac (*Rhus typhina*).
- Along the perimeter of the site, and specifically within the extraction setback areas, and once the perimeter berms have been removed, the lands will be subject to rehabilitation according to the rehabilitation concept. This will encourage the growth of numerous ecological linkages along the perimeter of the lake and property boundaries.
- Bisecting SWD3-2 – Silver Maple Mineral Deciduous Swamp is the former Carl Road alignment. The segment of Carl Road that bisects the deciduous swamp shall be rehabilitated following the decommissioning of the road. This linear disturbance has enabled invasive plants to infiltrate the swamp interior and may be increasing predation pressure on

wildlife from domestic and feral animals (cats and dogs) as well as opportunistic wild predators and scavengers that benefit from anthropogenic disturbance such as coyotes or raccoons. Excavations in three or four areas along the length of the road should be created to improve surface water drainage. Plantings along this segment of Carl Road should include the dominant tree and shrub species found in the deciduous swamp including silver maple, pin oak, swamp white oak, bur oak, red maple, and spicebush. Invasive shrub species including multiflora rose, common buckthorn, and Tartarian honeysuckle have become established in this area and may prevent the successful establishment of the native plantings. These invasive shrubs should be removed prior to the planting of Carl Road.

Policy 7.B.1.31 regarding Extraction within an Environmental Conservation Area, states that:

Where a new mineral aggregate operation or an expansion to an existing operation is proposed outside the Greenbelt Natural Heritage System within an Environmental Conservation Area, a Potential Natural Heritage Corridor or Fish Habitat or within adjacent lands as set out in Table 7-1 the Environmental Impact Study will include consideration of:

a) Whether the following will be maintained or enhanced before, during and after mineral aggregate extraction,

i) connectivity among Core Natural Areas and hydrologic features; and

ii) significant hydrologic features and functions; and

b) How significant natural heritage features and ecological functions that would be affected will be replaced, on or off site, with features and functions of equal or greater ecological value that are representative of the natural ecosystem in that particular setting or ecodistrict.

Response: As noted above, woodlot SWD3-2 – Silver Maple Mineral Deciduous Swamp is part of the Core Natural Heritage System. This feature will be maintained and enhanced before, during and after mineral aggregate extraction as detailed in our reply to Policy 7.B.1.19 above.

Furthermore, significant hydrologic features have been identified as the ponds within the former Humberstone Speedway may contain fish, and if present, will need to be removed prior to dewatering or destruction of the ponds. This will require a permit to collect fish for from MNRF and be obtained prior to relocation to avoid contravention of the Fisheries Act. Any native fish present are to be relocated to suitable nearby habitat and non-native fish are to be euthanized.

As well, before, during and after the development of the quarry, there will be ongoing monitoring of surface water and groundwater monitors, the evaluation of the vegetation within SWD3-2 – Silver Maple Mineral Deciduous Swamp during the operational life of the quarry, and have been included onto the Site Plans, all which are enforceable by provincial staff of MNRF.

Lastly, as confirmed by the NEL 1/2, no significant natural heritage features or ecological functions will be affected on or off site. However, features and functions of equal or greater ecological value are being proposed to augment the ecological character of the site through the introduction of proposed site features which will be representative of the natural ecosystem within this particular setting or ecodistrict including:

- Creating a range of new ecological habitat both south and east of the woodlot including the post extractive 65 hectare lake being 8.0 metres – 16.0 metres deep.
- Wetland enhancement areas the fringe of the lake.
- Setback areas proposed to be subject to natural succession.
- The natural succession of the former Carl Road right of way.

Policy 7.B.1.33 as required by Policy 6.C.5 states that:

When operators are undertaking rehabilitation of mineral aggregate operation sites within the Unique Agricultural Areas in the Greenbelt Area the following provisions apply:

As noted above, the subject lands are not within the Greenbelt Plan area and therefore, this Policy is not applicable to this application.

7.B.34 as required by 6.C.5:

> *Final rehabilitation of mineral aggregate operations in the Greenbelt Natural Heritage System shall meet these additional provisions:*

Response: As noted above, the subject lands are not within the Greenbelt Plan area and therefore, this Policy is not applicable to this application.

Policy 7.B.2 regarding Environmental Impact Statement, states that:

> An Environmental Impact Study (EIS) required under this Plan shall be submitted with the development application and shall be prepared and signed by a qualified biologist or environmental planner in accordance with the Environmental Impact Study Guidelines (EIS Guidelines) adopted by Regional Council. An EIS shall be prepared to the satisfaction of the appropriate Planning Authority, in consultation with the NPCA and the other commenting body. Within Settlement Areas as delineated in this Plan, an EIS shall be prepared to the satisfaction of the appropriate local municipality in consultation with the Region and the NPCA. Outside of Settlement Areas, an EIS shall be prepared to the satisfaction of the Region, in consultation with the appropriate local municipality and the NPCA. The Planning Authority, the other commenting body and the NPCA shall work collaboratively throughout the EIS process.

Response: As part of the Pre-Submission Consultation, the Terms of Reference for the EIS were provided to the Region for their review. A copy of the Natural Environment Level 1 and 2 (EIS) is attached hereto as Appendix L.

6.4.5 Major Goods Movement Facilities

Policy 9.H.3 states that:

The Niagara Region and its local municipalities will ensure that development of lands adjacent to or near major goods movement facilities and corridors will be compatible with the goods movement function of those facilities and be designed to avoid, mitigate or minimize negative impacts on and from the facilities and corridors.

Response: Currently, PCQ haul truck traffic utilizes an entrance/exit onto Highway 140 via Second Concession Road. This access will continue during the initial extraction of Phase 1 of Pit 3 Extension until such time that PCQ will construct a new entrance / exit onto Highway 3 coincident to the Weaver Street intersection. This location avoids a Miller Road option which would have had the potential to create land use impacts. The Traffic Impact Study which is attached hereto as Appendix O, recommends the construction of an eastbound deceleration lane into the quarry and the overall quarry entrance will be constructed to meet provincial MTO standards.

6.4.6 Implementation

Policy 14.D.5 states that:

> *Where an Amendment is proposed to the Regional Official Plan, the Region shall consider the following criteria in evaluating the Amendment:*
>
> *v. The effect of the proposed change on regional services and infrastructure.*
>
> *viii. The effect of the proposed change on the financial health, safety and economic sustainability of the Region.*

Response: As specified through the Pre-submission Consultation, fulfillment of this policy necessitated the completion of a Financial Impact Assessment / Economic Benefit Report and subsequently, PCQ retained IBI Group to undertake the applicable report which is attached hereto as Appendix H. In summary, the report concluded that the quarry will: a) increase in Regional and City tax revenue by as much as $1.2 million, b) provide aggregate levies to the Region and City up to $7.0 million, c) to maintain the same number of jobs (20) currently employed, and d) have no anticipated impact on any of the Region's or City's capital programs. Specifically, the design and construction of the quarry entrance/exit will be at the full expense of PCQ.

6.4.7 Summary of the ROP Policies

As part of the planning review for the Pit 3 Extension, and as stated in Chapter 14 under Policy 14.C.1, "*When reading and interpreting this Plan, the objectives and policies should be read in their entirety*". Based on this, the relevant policies of the ROP focused on:

- Policy 5.B – Agriculture
  - 5.B.5
  - 5.B.7
- Policy 6.C – Mineral Resources
  - 6.C.4
  - 6.C.5
  - 6.C.8
  - 6.C.13
- Policy 7.A.2.6 - Stormwater Management
- Policy 7.B - Core Natural Heritage System
  - 7.B.1.6
  - 7.B.1.8
  - 7.B.1.10
  - 7.B.1.13
  - 7.B.1.15
  - 7.B.1.16
  - 7.B.1.19
  - 7.B.1.31
  - 7.B.1.33
  - 7.B.1.34
  - 7.B.2
- Policy 9.H.3 - Major Goods Movement Facilities and Corridors
- Policy 14.D.5 - Implementation (Financial Impact Assessment / Economic Benefits)
  - 14.D.5 v) viii)

Based on the above review, it is our opinion that the Pit 3 Extension and specifically the Site Plans which have been designed based on the recommendations from the numerous technical

studies, are consistent with the goals and objectives of the above noted policies of the Niagara Region Official Plan subject to the following amendment to the ROP:

i. Add to Section 13 the site-specific policies to permit the Pit 3 extension quarry operation.

ii. Identify the subject lands on Schedule D4 - *Mineral Resources* as a Licensed Pits and Quarries.

6.5 City of Port Colborne Official Plan (2017)

Under Section 1.2 (b), Purpose of the Plan, the City of Port Colborne Official Plan (OP) states, "It is the intent that the Plan will be a guide to all public and private agencies concerned with development of the City. Accordingly, the subject matter in the Plan is specific to Port Colborne which results in a concise document that speaks to the needs of the local community while having regard for good planning principals.

Accordingly, the Official Plan has identified the subject lands to have the following designations:

Schedule A – City Wide Land Use	Agricultural
Schedule B – Natural Heritage	Environmental Conservation Area Environmental Protection Area and Streams
Schedule B1 Environmental Protection Zone	Natural Hazard
Schedule B2 Environmental Conservation Area	Significant Woodlands, Non Provincial Significant Wetlands and Streams

Based on our review of the OP and through the Pre-Submission Consultation process, the relevant policies of the OP are focused on:

- Policy 3.5 Agriculture
- Policy 4.1 Natural Heritage Features
- Policy 4.2 Environmental Protection Areas
- Policy 4.3 Environmental Conservation Areas
- Policy 7.3 Archaeological Resources
- Policy 8.2 Stormwater Management
- Policy 10.2 Aggregate / Extractive Industrial Sites

6.5.1 Agriculture

Policy 3.5 states that:

Areas identified on Schedule A as Agricultural are Prime Agricultural Areas as defined by the Provincial Policy Statement and as identified on the Agricultural Land Base Map of the Regional Policy Plan and are used primarily for agricultural purposes.

Response: *Prime Agricultural Areas* as defined by the Provincial Policy Statement permit "the extraction of mineral aggregate resources as an interim use provided that the lands are rehabilitated to an agricultural condition (PPS 2014, Policy 2.5.4).

Justification for the permanent loss of agricultural lands has been provided in Section 6.1 above.

6.5.2 Natural Heritage Features

Policy 4.1.2.2 regarding Environmental Impact Studies states that:

a) *An Environmental Impact Study shall be carried out by professionals qualified in the field of environmental sciences and acceptable to the City, the Regional Municipality of*

Niagara, and the Niagara Peninsula Conservation Authority, as required. Prior to the commencement of the Study, Terms of Reference, prepared by the applicant, or consultant acting on behalf of the applicant, acceptable to the City of Port Colborne shall be prepared in consultation with the Niagara Peninsula Conservation Authority, the Region and any other applicable agencies.

Response: In advance of the preparation of the Environmental Impact Study (EIS), the applicant participated in Pre-Submission Consultation, (April 23, 2020) which included staff from the MNRF, Niagara Region, City of Port Colborne and NPCA. We can also confirm that the Natural Environment Level 1 and 2 Report (EIS), attached hereto as Appendix L, has been prepared by professionals in their field. Curriculum Vitae for H. Melcher and L. Owen are attached to that report.

b) In general the Environmental Impact Study (EIS) shall include:

i) A description of and statement of the rationale for the proposal and alternatives to the proposal;

ii) A description of adjacent land use and the existing regulations affecting the proposal and adjacent lands;

iii) A description of the proposed undertaking, including a location map showing proposed buildings, existing land uses and buildings, existing vegetation, fauna, site topography, drainage, hydrology, soils and habitat areas;

iv) A description of all natural features and functions, including hydrologic, surface and ground water functions, on site and on adjacent lands that might directly or indirectly be affected by the proposal;

v) A description of alternate forms that the proposal could take including an assessment of the advantages and disadvantages of each;

vi) An assessment of the impacts that might reasonably be caused to the natural features and functions by the proposal including the cumulative effect of the impacts;

vii) An identification and evaluation of the actions necessary to prevent, change, mitigate or remedy any assessed impacts upon natural heritage features and functions and the alternative methods of protecting the functions and values of the areas affected;

viii) A concluding statement that the policy objectives of the Environmental Protection Area or Environmental Conservation Area designation are being complied with;

ix) The required scope and/or content of an EIS may be reduced in consultation with the appropriate agencies where;

a) The environmental impacts of the development are thought to be limited; or

b) Other environmental studies fulfil all or some of the requirements

x) Any other information required by the City, the Ministry of Natural Resources, the Niagara Peninsula Conservation Authority, or the Region that is deemed necessary to evaluate the proposal in relation to the Natural Heritage Feature identified; and

xi) For development or site alteration within or adjacent to an Environmental Conservation Area within the Urban Area Boundary, an EIS shall be prepared to the satisfaction of the Region and in consultation with the City and the Niagara Peninsula Conservation Authority. Development or site alteration within or adjacent to Environmental Conservation Areas outside the Urban Area Boundary, as well as adjacent to Environmental Protection Areas requires the preparation of an EIS to

the satisfaction of the Region in consultation with the City, the Niagara Peninsula Conservation Authority and the Ministry of Natural Resources, as required.

Response: The Natural Environment Level 1 and 2 Report (EIS), attached hereto as Appendix L was prepared with all the above noted criteria.

Policy 4.1.2.5 regarding Tree Saving Plans states that:

Where development or site alteration is approved in accordance with the policies of this Plan, the applicant shall submit a Tree Saving Plan maintaining or enhancing the remaining natural features and ecological functions. The Plan shall be prepared in accordance with the administrable Tree Conservation By-Laws and related Environmental Impact Study and its implementation monitored by a member of the Ontario Professional Forestry Association or consultant who prepared the Environmental Impact Study.

Response: A Tree Preservation Plan was prepared by IBI and dated October 2020 and is attached hereto as Appendix P. The Tree Preservation Plan concluded that trees located within the FOD7-2 community (including Vegetation Units 'A', 'B', and 'C') are recommended for removal to permit the Phase 2 extraction work of the proposed quarry expansion. The presence of Emerald Ash Borer damage, high occurrence of Ash trees, pioneer species and possible restoration plantings, within the study area as well as the relatively young age of the trees present on site contribute to a low preservation priority for the FOD7-2 feature.

The Report also provide numerous recommendations for tree protection for the surrounding woodlot areas that are to be retained.

Notwithstanding the justification for the removal of FOD7-2, and the agricultural fields, no other vegetation from the site will be removed and therefore maintaining the remaining natural features and ecological functions. The enhancement of the remaining natural features and ecological functions will be undertaken by:

- Ecological linkages between the key natural heritage features in the study area will be improved. The area north of the existing quarry (Pit 3) and west of the northern end of the deciduous swamp shall be rehabilitated to enhance connectivity and wildlife movement between the deciduous swamp and the significant woodland located north of Second Concession Road between Carl Road and Babion Road. These two significant woodlands are separated by Second Concession Road and distance of approximately 70 metres. The area to be rehabilitated consists of a berm vegetated with terrestrial grasses and forbs and a sparsely vegetated area north of Pit 3.
- The setback area at the north end of extraction area 3 and east of the deciduous swamp will be supplemented with additional plantings to enhance connectivity and wildlife movement opportunities between the deciduous swamp and the hedgerow located east of the site woodland located northeast of the site across Second Concession Road. This area currently consists of a cultural meadow. The establishment of a wooded area will create a corridor linking the north end of the deciduous swamp with the forested areas offsite, including the significant woodland located between Carl Road and Babion Road. These additional plantings will also enhance ecological connectivity and facilitate wildlife movement between these features. Native tree and shrub species plantings should be selected based on their suitability for the soils and moisture regime.
- Along the perimeter of the site, and specifically within the extraction setback areas, and once the perimeter berms have been removed, the lands will be subject to natural succession. This will encourage the growth of numerous ecological linkages along the perimeter of the lake and property boundaries.
- Bisecting SWD3-2 – Silver Maple Mineral Deciduous Swamp is the former Carl Road alignment. This segment of Carl Road shall be rehabilitated following the decommissioning

of the road. This linear disturbance has enabled invasive plants to infiltrate the swamp interior and may be increasing predation pressure on wildlife from domestic and feral animals (cats and dogs) as well as opportunistic wild predators and scavengers that benefit from anthropogenic disturbance such as coyotes or raccoons. Excavations in three or four areas along the length of the road should be created to improve surface water drainage.

Policy 4.1.3 regarding Surface Water and Groundwater Protection, states that:

a) Development and site alteration shall only be permitted if it will not have negative impacts, including cross-jurisdictional and cross-watershed impacts on:

i) The quantity and quality of surface and ground water;
ii) The functions of ground water recharge and discharge areas, aquifers and headwaters;
iii) The natural hydrologic characteristics of watercourses such as base flow;
iv) Surface or ground water resources adversely impacting on natural features or ecological functions of the Core Natural heritage system or its components;
v) Natural drainage systems, stream forms and shorelines; and
vi) Flooding or erosion.

Response: The Hydrology Assessment (Appendix I) and the Hydrogeology Assessment (Appendix J and the Natural Environment Level 1 and 2 Report (EIS), (Appendix L) were prepared collaboratively so that all the above criteria was included.

b) Development and site alteration shall be restricted in the vicinity of vulnerable surface and ground water features of importance to municipal water supplies so that the safety and quality of municipal drinking water will be protected or improved.

Response: As confirmed in the Hydrogeological Assessment (Appendix J), there are no municipal water supplies near the proposed Pit 3 Extension nor within the identified anticipated drawdown cone around beyond the proposed quarry lands. Although not a component identified by this policy, the Hydrogeological Assessment does also address the on-going protection of private domestic wells within the vicinity and provides recommendations for both long-term monitoring of the groundwater levels and quality, but also a specific well interference protocol if necessary.

c) Prior to any planning approvals, new development applications requiring a Provincial Permit to Take Water shall satisfy the Region that the water taking will not have negative impacts on the natural ecosystems or the quality and quantity of water to meet existing and planned uses.

Response: As confirmed in the Hydrogeological Assessment (Appendix J), the existing Port Colborne Quarries Inc. quarry operation operates under a current Provincial (Ministry of Environment, Conservation and Parks – MECP) Permit to Take Water (PTTW). This reflects the current dewatering program of the abutting Pit 3. The operation of the proposed Pit 3 Extension will require a new PTTW application to allow the dewatering process. The Hydrology Assessment, (Appendix I) Hydrogeological Assessment (Appendix J) and the Natural Environment Level 1 / 2 (EIS) (Appendix L) all identified the potential for impact due to the PTTW and through avoidance of key natural features within the 'limits of extraction' as well as buffers and the numerous design recommendations in each report, no negative impacts are predicted on the natural ecosystem or the quality and quantity of water to meet existing and planned uses. To further safeguard these features, on-going hydrology, hydrogeological and natural environment monitoring are being recommended, all which have been incorporated into the Site Plans and which will be enforceable by applicable MNRF staff.

6.5.2 Environmental Protection Areas

Policy 4.2 regarding Environmental Protection Areas states that:

Areas designated as Environmental Protection on Schedule B are those lands that are classified as Provincially significant wetlands (PSW's), Provincially Significant Areas of natural and scientific interest (ANSI's), the Significant Habitat of Threatened and Endangered species and Natural Hazard Areas as identified on Schedule B1. The predominant uses for lands designated Environmental Protection Area shall include forest, fish and wildlife management; small-scale passive recreational uses and accessory uses such as: trails, boardwalks, footbridges, fences, docks and picnic facilities that will not negatively impact on the natural features or ecological function of the areas; and conservation and flood erosion control projects where it has been demonstrated that they are necessary in the public interest and no other alternatives are available

Response:

The Habitat for Threatened and Endangered Species are addressed below under 4.2.3

The Natural Hazards are addressed below under 4.2.4

Policy 4.2.3 regarding Significant Habitat of Threatened and Endangered species states that:

The Significant Habitats of Threatened and Endangered Species are identified by the Ministry of Natural Resources. This designation intends to protect these habitats within the City.

4.2.3.1 General Policies

a) Development and site alteration will not be permitted within the boundary of the Significant Habitat of Threatened and Endangered Species. Development may only be permitted in accordance with Provincial requirements.

b) The City will require an Environmental Impact Study for new development and site alteration proposals for all adjacent lands within 50 metres of the Significant Habitat of Threatened and Endangered species boundary to demonstrate that there will be no negative impacts on the feature or its ecological functions.

c) Significant Habitats of Threatened and Endangered Species are not shown on the land use schedules. In instances where the habitat of threatened and endangered species is identified by study or agency review of applications, the Policies of Section 4.2.3.1 shall apply.

d) The Ministry of Natural Resources should be contacted to determine the potential implications of the Endangered Species Act on the proposed development or site alteration.

Response: The Natural Environment Level 1 and 2 Report (EIS), attached hereto as Appendix L has identified numerous Threatened and Endangered Species and/or potential habitat on and/or within 120 metres of the site including Bank Swallow, Bobolink, Eastern Meadowlark, Chimney Swift, Bats. The underlying intent of Pit 3 Extension design has been avoidance of such habitat and based on that, the design and development of the subject application does not include development or site alteration within such habitat except in accordance with provincial and federal requirements.

Policy 4.2.4 regarding Natural Hazards states that:

The areas identified on Schedule B1 are lands and/or specific properties which could be unsafe for development due to naturally occurring processes. Hazardous Sites are defined as lands having inherent environmental hazards such as flood susceptibility, erosion, steep slopes, unstable soils or any other physical condition that might present a risk in terms of loss of life, property damage or social disruption. Natural Hazards may include: flooding hazards, erosion hazards or dynamic beach hazards (which include Dune Protection areas). There are Natural

Hazards associated with the Lake Erie shoreline as well as for river and stream systems throughout the municipality. The Policies of this Section shall also apply where lands are found,

through study, to exhibit characteristics of Hazardous Lands, but are not shown on Schedule B1 of this Plan.

Response: Schedule B1 of the Official Plan identifies Natural Hazards on the subject site, which are associated with the west and east branches of the Wignell Drain. The Wignell Drain is managed by the City of Port Colborne under the Drainage Act and is currently looking to realign the drain as it traverses the site. Based on the Hydrological Assessment (Appendix I) and Hydrogeological Assessment (Appendix J), there are no other known or suspected hazards on those abutting lands. Specifically, the existing quarry lands are properly fenced, and the slopes continue to be progressively rehabilitated to create slopes which meet MNRF requirements.

6.5.3 Environmental Conservation Areas

Policy 4.3 regarding Environmental Conservation Areas states that:

Areas designated as Environmental Conservation Areas on Schedule B are those lands that are classified as; Regionally Significant Areas of natural and scientific interest, Non-Provincially Significant Wetlands, Significant Wildlife Habitat, Significant Woodlands, Significant Valleylands, Habitats of Species of concern and Environmental Corridors and Linkages as identified on Schedule B2. The predominant uses for lands designated Environmental Conservation Area shall include existing uses, conservation uses, flood and erosion control, fish, forestry and wildlife management, as well as passive recreational activities.

Response: As highlighted on the City Official Plan Schedule B, the subject site contains lands designated as Environmental Conservation Area and specifically those areas referenced as SWD3-2 – Silver Maple Mineral Deciduous Swamp. The lands designated as Environmental Conservation Areas will not be disturbed and their use will continue to be conservation uses, flood and erosion control, forestry and wildlife management, as well as passive recreational activities, while remaining in private ownership.

4.3.1 General Policies

d) If an Environmental Impact Study is completed and a feature or function is identified that warrants the protection of the Environmental Conservation Area as an Environmental Protection Area, then the policies of the Environmental Protection Area shall apply. Non-Provincially Significant Wetlands or unevaluated wetlands will only be reclassified to a Provincially significant wetland and designated as an Environmental Protection Area upon the completion and approval of a wetland evaluation by the Ministry of Natural Resources.

Response: The Policies of the Environmental Protection Area are addressed below.

e) The boundaries of an Environmental Conservation Area may be refined through an Environmental Impact Study or Environmental Planning Study. Minor boundary adjustments will not require an amendment to this plan.

Response: The boundaries of an Environmental Conservation Area are not being recommended for modification as a result of the completion of the Environmental Impact Study.

f) The City will require an Environmental Impact Study for new development proposals for all adjacent lands within 50 metres of lands designated as Environmental Conservation to demonstrate that there will be no negative impacts on any surrounding features.

Response: The Natural Environment Level 1 and 2 Report (EIS), attached hereto as Appendix L has been completed and has demonstrate that there will be no negative impacts on any surrounding features.

g) *The Niagara Peninsula Conservation Authority should be consulted as to whether a permit is required to address Regulations under the Conservation Authorities Act.*

Response: The NPCA has participated in Pre-Submission Consultation and their review comments will be required as part of the overall planning process under both the Planning Act and Aggregate Resources Act.

6.5.4 Archaeological Resources

Policy 7.3 regarding archaeological resources states that:

a) A minimum of a Stage 1 Archaeological Assessment is required to be submitted to the Ministry of Tourism, Culture and Sport for approval where development is proposed on lands which have archaeological potential as determined by the City, the Region and/or the Ministry of Tourism, Culture and Sport.

b) Depending on the results of the Stage 1 Archaeological Assessment referenced in Policy 7.3 (a), it may be necessary to undertake Stage 2 to 4 assessments.

c) Pioneer and other cemeteries shall be retained in their original location and will not be relocated to accommodate private development.

d) Development and site alteration shall only be permitted on lands containing archaeological resources or areas of archaeological potential if the significant archaeological resources have been conserved by removal and documentation, or by preservation on site. Where significant archaeological resources must be preserved on site, only development and site alteration which maintains the heritage integrity of the site may be permitted.

Response: An Archaeological Stage 1, (Background Study) and Archaeological Stage 2 (Property Assessment) was prepared and attached hereto as Appendix E i) as well as Supplementary Documentation regarding the Stage 1 and 2 Assessment as Appendix E ii) both being submitted to the Ministry of Heritage, Sport, Tourism and Culture Industries. The findings of the Stage 1 and 2 reports identified that the site contained numerous archaeological findspots and many were cleared as a result of the Stage 1 and 2 work. Additional sites remain that have been identified as requiring further Stage 3 assessment, but in keeping with Ministry protocol, a 70.0 metre no-go buffer has been identified around these features. Within the buffers, no soil/site disturbance is permitted except for on-going agricultural use until the Stage 3 (and potentially 4) assessment work clears the sites.

No pioneer or other cemeteries were discovered and the above noted studies have confirmed that within the proposed extraction area, all archaeological resources have been recovered.

6.5.5 Stormwater Management

Policy 8.2 states that:

a) Stormwater will be managed on-site and will not have an adverse impact to neighbouring properties or the drainage patterns of the surrounding area.

*b) A stormwater management plan and a sediment and erosion control plan prepared and signed by a qualified engineer may be required with a development application depending on the scale and nature of the proposal and site specific environmental conditions. Stormwater management plans shall be prepared in accordance with Policy 7.A.2.1, of the Ontario Ministry of the Environment Stormwater Management Planning and Design Manual 2003 or its successor, and with watershed and/or environmental planning studies for the area. **A stormwater management plan and a sediment and erosion control plan shall not be required for a new mineral aggregate operation or the expansion to an existing operation where these matters are adequately addressed through studies prepared to meet the requirements of the Aggregate Resources Act.** [Emphasis added]*

Response: It is acknowledged that the City OP does not require a stormwater management plan for new mineral aggregate operations where these matters are adequately addressed through the studies prepared in support of the application. In that regard, we confirm that the Hydrology Assessment (Appendix I) included a description of how stormwater will be managed.

6.5.6 Aggregate/Extractive Industrial Sites

Policy 10.2 provides direction on how amendment applications are to be evaluated. Table 3 below summaries the requirements of Policy 10.2.2 and how this has been addressed.

TABLE 3 – CITY OF PORT COLBORNE OFFICIAL PLAN POLICY FULFILLMENT MATRIX
POLICY 10.2.2 NEW PITS/QUARRIES OR EXPANSION OF PITS/QUARRIES

Policy 10.2.2	**Policy Fulfillment**
a) In considering an application for an amendment pursuant to Section 10.2 (a-d) the following will be evaluated based on submitted studies:	
i. Compatibility with adjacent, existing and planned land uses with respect to noise, dust, blasting, vibration and truck traffic;	Compatibility with adjacent, existing and planned land uses has been addressed with respect to: • Noise (Acoustical): refer to Appendix B, • Dust (Air Quality): refer to Appendix D, • Blasting/vibration: refer to Appendix F, and, • Truck traffic: refer to Appendix O. In addition, refer to the comprehensive Land Use Compatibility Report (Appendix K).
ii. Potential impacts on the natural environment, including measures required to minimize or avoid adverse impacts;	Potential impacts on the natural environment including measure required to minimize or avoid adverse impacts are confirmed in the Natural Environment Level 1 / 2 (EIS) report (Appendix L)
iii. Potential impacts on the quality and quantity of surface and groundwater systems;	Potential impacts on the quality and quantity of surface and groundwater systems have been identified and addressed in the Hydrology Assessment (Appendix I) and the Hydrogeology Assessment Level 1 / 2 (Appendix J).
iv. Potential impacts on surrounding agricultural operations and lands, including measures to mitigate these impacts;	Potential impacts on surrounding agricultural operations and lands, including measures to mitigate these impacts have been addressed in the Agricultural Impact Assessment (Appendix C)
v. Potential impacts on the transportation system which will require truck routes and points of site access to be established;	Potential impacts on the transportation system which will require truck routes and points of site access to be established are addressed in the Traffic Impact Study (Appendix O).
vi. The manner in which the mineral aggregate resource extraction and processing operations will be carried out including hours of operation;	The way the mineral aggregate resource extraction and processing operations will be carried out including hours of operation is addressed in a general description form as part of this Planning Report (Section 7.2) but more specifically and formally as part of the ARA Site Plans which total 8 drawings.
vii. If applicable, the capability of the land for agricultural uses;	The capability of the lands for agricultural uses has been addressed in the AIA (Appendix C) but in terms of the ability of the site to provide post-

	extractive lands for agriculture, refer to the Site Plans and specifically Sheet 8 of 8.
viii. Proposed progressive rehabilitation plan; and	The details of the progressive rehabilitation of the site are generally addressed within this report in Section 7.4 but more specifically on the Site Plans on Sheet 8 of 8. As noted within those documents, because of the limitations of below water table quarry operations, progressive rehabilitation is primarily limited to the creation of side slopes (ranging from 2:1 to 4:1) that will be constructed from on-site overburden and on-site subsoil and topsoil.
ix. Any other matters as the City deems necessary.	No additional specific matters were raised by the City as part of the Pre-Submission Consultation held on April 23, 2020.
c) For applications on Prime agricultural land, the site will be progressively rehabilitated to agriculture so that substantially the same area and average soil capability for agriculture are restored. Complete agricultural rehabilitation shall not be required if: i) There is a substantial quantity of aggregate resource below the water table warranting extraction; ii) The depth of planned extraction makes restoration of pre-extraction agricultural capacity unfeasible and 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 to 7 soils, resources on lands identified as greenfield area, 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. Canada Land Inventory Classes 1, 2 and 3; and iii) Agricultural rehabilitation in remaining areas will be maximized.	Complete agricultural rehabilitation of the site is not planned. Justification for the final rehabilitation not being returned to complete agriculture is found in Section 6.2.5, 6.2.6, 6.4.1, and 6.5.1. Post-extractive rehabilitation will be primarily a lake totaling 117 hectares (in combination with the abutting Pit 3 lands) and be approximately 8.0 metres – 16.0 metres deep. Portions of the extraction lands outside of the proposed lake include the lake shore lines and setback areas (10.0 metres – 15.0 metres wide) which are too narrow to efficiently accommodate agriculture, and which will be the focus of planting natural vegetation. Areas where agriculture will be available will primarily be focused on those lands licensed lands outside the 'limit of extraction' and include those north of 1252 and 1326 Main Street that were excluded from extraction due to significant archaeological findings.
d) Outside the prime agricultural areas or where agricultural rehabilitation is not required, the City will require progressive rehabilitation of pits and quarries to an appropriate after use as determined by the City that is in conformity with the adjoining land use designation and policies, the surrounding natural environment and existing uses.	Final rehabilitation will be the creation of a lake. This land use reflects the long-term land use of the Pit 3 lands which abut to the west and for which will be created a common lake totaling approximately 117 hectares in size. In additional, the lands west of Babion Road (Pit 2 lands) are also currently licensed with the requirement to be rehabilitated to a lake, being +/- 50 hectares.
e) In environmental areas, as provided in Section 4, the City will require rehabilitation to enhance the restoration of ecosystem integrity in accordance with the policies of this Plan, the Regional Policy Plan and the appropriate watershed/sub-watershed study.	Key considerations arising from Section 4 of the OP are the requirements for a: a) Environmental Impact Study. b) Tree Preservation Plan. c) MNRF Wetland Evaluation. d) 15 m buffer from the Municipal Drain system. A discussion on how the proposed operation has addressed these requirements and incorporated the protection and restoration of environmental features is provided in Section 7.4 and 7.5 of this Report and as documented on the Site Plans.
f) Where such resources exist, the City will promote and encourage rehabilitation of	Cultural Heritage resources in or adjacent to the site including the conservation of significant cultural

aggregate operations in a manner which incorporates the cultural and heritage resources in or adjacent to the site, including the conservation of significant cultural or heritage features where practical.	or heritage features have been addressed by the Cultural Heritage Screening Report (Appendix G). Of note, none were identified on the site nor on adjacent lands.

6.5.7 Summary of the City of Port Colborne Official Plan Policies

As part of the planning review for the Pit 3 Extension, and through the Pre-Submission Consultation process, the relevant policies of the City of Port Colborne Official Plan were focused on;

- Policy 3.5 Agriculture
- Policy 4.1 Natural Heritage Features
  - 4.1.2.2 a)
  - 4..1.2.2 b) i) – ix)
  - 4.1.2.5
  - 4.1.3 a) i) ii) ii) iv)
  - 4.1.3 b)
  - 4.1.3 c)
- Policy 4.2 Environmental Protection Areas
- Policy 4.3 Environmental Conservation Areas
  - 4.2.3.1 a) b) c) d)
  - 4.2.4
  - 4.3
  - 4.3.1 d) e) f) g)
- Policy 7.3 Archaeological Resources
  - 7.3 a) b) c) d)
- Policy 8.2 Stormwater Management
  - 8.2 a) b)
- Policy 10.2 Aggregate / Extractive Industrial Sites
  - 10.2 a i) – ix)
  - 10.2 c)
  - 10.2 d)
  - 10.2 e)
  - 10.2 f)

Based on the above review, it is our opinion that the Pit 3 Extension and specifically the Site Plans which have been designed based on the recommendations from the numerous technical studies, are consistent with the goals and objectives of the above noted policies of the City of Port Colborne Official Plan subject to the following amendment to the Official Plan:

- To change the designation to Mineral Aggregate Operations and add a Special Policy Area to permit the proposed quarry.

6.6 Niagara Peninsula Conservation Authority (NPCA)

As specified in the Niagara Peninsula Conservation Authority (NPCA) Policy Document: Policies For The Administration Of Ontario Regulation 155/06 And The Planning Act, under Section 2.2 entitled The Conservation Authorities Act, it states: "*Section 28.11 of limits the role of conservation authorities in regards to aggregate resource extraction, stating that "a requirement for permission of an authority in a regulation made under clause 28(1) (b) or (c) does not apply to an activity approved under the Aggregate Resources Act"*.

Based on the above, no regulatory permits are required by PCQ for the Pit 3 extension from the NPCA. Notwithstanding the above, the application must still be consistent with the NPCA's Policy Document: Policies For The Administration Of Ontario Regulation 155/06 and The Planning Act.

Based on our review of the NPCA Policy Document, the relevant policies are focused on:

- Policy 3.3.5 Use of Native Plant Species
- Policy 7.1.1 Hazardous Sites and Hazardous Lands
- Policy 8.0 Wetlands
- Policy 9.1.1 Watercourses
- Policy 9.1.2 Need for an EIS/Hydrological Study
- Policy 10.2 Placement of Fill and Aggregate / Extractive Industrial Sites
- Policy 11.1 Municipal Drains
- Policy 12.4 Supporting Studies

NPCA mapping illustrates that much of the lands along the north boundary which are occupied by the wetlands, are within the NPCA *Permit Review Area.* The following environmental features have been identified by the NPCA as being on site:

- *Regulated Flood Plains*
- *Regulated Wetlands*
- *Environmental Conservation Areas.*

NPCA mapping also identifies the lands as being within the *Highly Vulnerable Aquifer* and *Significant Groundwater Recharge* overlays.

For reference, the Pit 3 Extension lands are located within the Lake Erie North Shore 'Watershed Planning Boundary'.

6.6.1 Use of Native Plant Species

Policy 3.3.5 states that:

> *The NPCA recognizes the importance of a natural approach to landscaping through the use of native, non-invasive and locally appropriate species. Some Planning Act applications and work permits may require re-vegetation for disturbed areas and in these instances, the NPCA will encourage re-vegetation plans and landscaping projects to include an appropriate mix of native, non-invasive and locally appropriate plantings.*

Response: All plantings (i.e., nodal plantings) included in the rehabilitation plan will be locally native, non-invasive species that create habitat in the short term and promote natural succession processes. The sourcing of plantings will consider the regionally adapted genetics of the species. Plantings from local sources are likely to be well adapted to the local climate and growing conditions and may have a higher likelihood of successful establishment. Therefore, plantings will be procured from local sources to the extent possible.

6.6.2 Hazardous Sites and Hazardous Lands

Policy 7.1.1 states that:

> *The Provincial Policy Statement defines hazardous sites as lands that could be unsafe for development due to naturally occurring hazards. These may include unstable soils (sensitive marine clays [leda], organic soils) or unstable bedrock (karst topography). The Conservation Authorities Act uses a similar term, referring to hazardous lands, which are lands that are unsafe to development due to naturally occurring processes. Naturally occurring processes includes flooding, erosion, dynamic beaches and unstable soils. In the context of the Conservation Authorities Act, the term hazardous lands is used as a general term, referring to a full range of natural hazards (i.e., flooding, erosion, unstable soils).*

Response: As noted above in Section 6.1.7 regarding PPS Policy 3.2.1 states that "*Development on, abutting or adjacent to lands affected by mine hazards: oil, gas and salt hazards or former mineral mining operations, mineral aggregate operations or petroleum resource operations may be permitted only if rehabilitation or other measures to address and mitigate known or suspected hazards are under way or have been completed.*"

The Pit 3 Extension will be developed on lands abutting an active mineral aggregate operation (Pit 3). Based on the Hydrological Assessment (Appendix I) and Hydrogeological Assessment (Appendix J), there are no known or suspected hazards on those abutting lands. Specifically, the existing quarry lands are properly fenced and the slopes continue to be progressively rehabilitated to create slopes which meet MNRF requirements.

6.6.3 Wetlands

Policy 8.0 states that:

Wetlands are "lands that are seasonally or permanently covered by shallow water, as well as lands where the water table is close to or at the surface. In either case, the presence of abundant water has caused the formation of hydric soils and has favoured the dominance of either hydrophytic plants or water tolerant plants. The four major types of wetlands are swamps, marshes, bogs and fens. Periodically soaked or wet land being used for agricultural purposes which no longer exhibit wetland characteristics are not considered to be wetlands for the proposes of this definition" (PPS, 2014). The Conservation Authorities Act provides a similar definition of wetlands: "means land that:

a) is seasonally or permanently covered by shallow water or has a water table close to or at its surface;

b) directly contributes to the hydrological function of a watershed through connection with a surface watercourse;

c) has hydric soils, the formation of which has been caused by the presence of abundant water; and,

d) has vegetation dominated by hydrophytic plants or water tolerant plants, the dominance of which has been favoured by the presence of abundant water, but does not include periodically soaked or wet land that is used for agricultural purposes and no longer exhibits a wetland characteristic referred to in clause c) or d).

Response: The Hydrology Assessment (Appendix I) and the Natural Environment Level 1 / 2 Report (EIS), (Appendix L) have identified and evaluated the wetlands on the site (SWD3-2) and on adjacent lands SWD/FOD [north of Second Concession Road].

6.6.4 Environmental Impact Study

Policy 8.1.4 states that:

Depending on the nature of the proposed development, the NPCA may request that the applicant undertake an EIS to evaluate the potential impacts on a wetland. Chapter 12 provides additional direction for undertaking an EIS.

Response: For continuity, we have included NPCA Policy 12.4.4 within this section of the report.

12.4.4 Environmental Impact Study (EIS)

12.4.4.1 Need for an EIS

An EIS is a tool for objectively assessing the environmental impacts of a proposed development or site alteration, and is both a planning and decision-making tool. An EIS is required where development and site alteration is proposed wholly or partially within, or adjacent to, a natural heritage feature as defined in Provincial, Regional, local

> policies and regulations. It is also required where development and site alteration is proposed in the Greenbelt Natural Heritage System and on lands adjacent to key hydrologic features in the Greenbelt. In the context of an application under the Planning Act, an EIS is required to confirm the impact of the proposed development on a Regulated feature(s) and/or functions. An EIS can also be required to support a work permit application under the Conservation Authorities Act where proposed development has potential to impact natural and/or hydrological features and functions (i.e., conservation of land, interference with a watercourse or wetland, control of pollution, etc.). Note that not all work permit applications under the Conservation Authorities may have been subject to a Planning Act application (hence the need for an EIS under the CA Act).
>
> 12.4.4.2 EIS Requirements
>
> There are different standards and requirements for completing an EIS within the watershed. Niagara Region, the City of Hamilton and County of Haldimand each maintain different technical guidelines for conducting an EIS. When preparing an EIS, the applicant and NPCA should refer to the appropriate EIS guideline based on the location of the proposed development, until such time as the NPCA-approved EIS Guidelines for Regulated areas is available. Where a municipality does not have formal EIS guidelines, the NPCA will refer to the Ministry of Natural Resources and Forestry's Natural Heritage Reference Manual. In all cases the applicant must obtain site-specific scoping of the EIS from the NPCA prior to the commencement of the field studies. Furthermore, the NPCA may require a water balance to demonstrate no negative impact to the Hydrological function of a wetland.

Response: The Natural Environment Level 1 and 2 Report (EIS), is attached hereto as Appendix L. In addition, the Hydrology Assessment (Appendix I) did complete a water balance to demonstrate no negative impact to the Hydrological function of the wetland as a result of the proposed Pit 3 Extension operation or during progressive and final rehabilitation.

Policy 8.1.5 regarding Hydrogeology Studies states that:

> *Depending on the nature of the proposed development, the NPCA may request that the applicant undertake a hydrological study to confirm potential impacts on the hydrologic function the wetland. Refer to Chapter 12 for additional details.*

Response: For continuity, we have included NPCA Policy 12.4.8.2 within this section of the report.

> 12.4.8.2 Hydrological Study
>
> A hydrological study may be required to confirm potential impacts on water quality or waterquantity. Hydrological studies shall, at a minimum, address the following:
>
> a) demonstrate that the development or site alteration will have no adverse effects on the hydrologically sensitive feature or on the related hydrological functions;
>
> b) identify planning, design and construction practices that will maintain and, where possible, improve or restore the health, diversity and size of the hydrologically sensitive feature; and,
>
> c) determine whether the minimum vegetation protection zone is sufficient and, if it is not sufficient, specify the dimensions of the required minimum vegetation protection zone and provide for the maintenance and, where possible, improvement or restoration of natural self-sustaining vegetation within it.

Response: The Hydrology Assessment (Appendix I) and the Natural Environment Level 1 and 2 Report (EIS), (Appendix L) were prepared with all the above criteria included.

Policy 8.2.2.1 regarding Development and Interference within a Wetland states that:

Unless otherwise stated in this Document, no development and/or site alteration shall be permitted within a wetland.

Response: The Hydrology Assessment (Appendix I) and the Natural Environment Level 1 and 2 Report (EIS), (Appendix L) attached hereto as Appendix I confirmed that no portions of the 'limit of extraction' shall be within the identified wetland.

Policy 8.2.6 regarding stormwater states that:

The NPCA may require enhanced stormwater controls where development is proposed to outlet into a wetland.

Response: The Hydrology Assessment (Appendix I) and the Natural Environment Level 1 and 2 Report (EIS), (Appendix L) confirmed that no additional site water will be outlet or be directed to the identified wetlands.

Policy 9.1.1 watercourses states that:

A watercourse is an identifiable depression in the ground in which a flow of water regularly or continuously occurs (Conservation Authorities Act). Watercourses are complex, multifunctional, living systems. They transport water, sediment and energy. They are ecosystems, providing habitat for fish, amphibians, invertebrates, birds, plants and other species. Watercourses provide drinking water for communities, wildlife and livestock. Watercourses are also highly valued socio-economic resources, offering recreational opportunities, food, hydro generation, land drainage and educational experiences.

Response: The Hydrology Assessment (Appendix I) and the Natural Environment Level 1 and 2 Report (EIS), (Appendix L) have identified and evaluated all watercourses within and adjacent to the site.

6.6.5 Need for an EIS/Hydrological Study

Policy 9.1.2 states that:

An EIS and/or hydrological study may be required to confirm the location and limits of a watercourse, as well as any potential impacts of the proposed development on the hydrological and ecological features and functions. An EIS may also be required to confirm the extent of any natural buffers (refer to policy 9.2.5 for additional details) or for morphological assessments or any impacts on established natural buffers.

Response:The Hydrology Assessment (Appendix I) and the Natural Environment Level 1 and 2 Report (EIS), (Appendix L) have been completed and include the locations and limits of watercourses, provided recommendations for avoidance and mitigation from potential impacts including buffers.

6.6.6 Placement of Fill and Aggregate / Extractive Industrial Sites

Policy 10.1.1 regarding Fill Placement and Authority to Regulate Fill Placement states that:

Fill is any material that can be placed, dumped or removed originating from the site or elsewhere, such as earth, sand, gravel or rubble, which is used to raise, lower or alter the existing grade. Fill is considered to be a form of development defined in Conservation Authorities Act, as site grading and the placement/removal of any material from a site are both examples of development (Conservation Authorities Act, Section 28(25c,d). Accordingly, the placement of fill within the areas regulated by the Niagara Peninsula Conservation Authority are subject to five tests listed under Section 28(1c) of the Act. The placement of fill outside of the NPCA's regulated areas are subject to local site alteration by-laws, meaning that in some cases, the placement of fill requires a shared regulatory framework, whereby the NPCA regulates the placement of fill within

regulated areas and the local municipalities regulate the placement of fill elsewhere on the site (where the lands are outside of the NPCA's regulated areas).

Policy 10.1.2 regarding Exceptions states that:

> The policies of this chapter generally do not apply to the following items:
>
> a) Approved development applications under the Planning Act as of May 4, 2006;
>
> b) **Fill activities proposed in accordance with a site licence under the Aggregate Resources Act**; or [Emphasis added]
>
> c) Projects under the Ontario Environmental Assessment Act.

Response: As part of the proposed progressive rehabilitation plan to create a variety of side slopes ranging from 2:1 to 4:1, the use of imported clean inert fill is **not** being proposed.

6.6.7 Municipal Drains

Policy 11.1 states that:

> *Municipal drains are an important piece of infrastructure for rural and agricultural land management, providing drainage systems which manage the impacts of flooding. Municipal Drains are created under the Drainage Act and municipalities are required to maintain and repair existing municipal drains and also make decisions for applications for new drains. Generally, municipal drains are considered watercourses as defined under the Conservation Authorities Act.*

Response: The Hydrology Assessment (Appendix I) and the Natural Environment Level 1 and 2 Report (EIS), (Appendix L) identify that the Wignell Drain is part of an existing Municipal Drain system. At this time, The East Branch of the Wignell Drain is being proposed to be realigned by the City of Port Colborne.

In addition, the Wignell Drain bisects the 'eastern arm' of the subject lands which encompass part of the proposed Phase 1. Although a portion Wignell Drain is being proposed to be re-aligned through the City of Port Colborne – Drainage Act process, the portion that bisects the 'eastern arm' is not included in the current process. Where the Wignell Drain bisects the site, , (within Phase 1 near Miller Road), PCQ Inc. has had several discussions with the City and their Drainage Engineer and they support the concept of a temporary relocation of the Wignell Drain. Practically, once the extraction within Phase 1 has proceed eastwardly to be in proximity to the Wignell Drain, a series of operational actions will occur, generally as follows:

- Construction of a temporary Wignell Drain around the property limits of the 'eastern arm',
- Excavation of the rock (Phase 1b) will commence,
- Backfilling ½ to 2/3 of the eastern arm to an elevation necessary to support the positive flow of the Wignell Drain,
- Relocating the Wignell Drain back generally it's original location,
- Creation of suitable fish habitat within the ditch and side slopes to provide a condition of aquatic habitat enhanced relative to its existing condition.

For PCQ Inc. to facilitate the completion of the Wignell Drain relocation quickly and provide a sufficient monitoring duration of the rehabilitation / aquatic habitat efforts, initial extraction of Phase 1 will focus on moving toward this portion of the site as soon as possible.

6.6.8 Erosion and Sedimentation Control Plans

Policy 12.4.9 states that:

> *An Erosion and Sediment Control Plan may be required to illustrate how a proposed development will address concerns of erosion and sediment control during and after*

construction. The detailed requirements for erosion and sediment control plans will be determined through pre-consultation with the NPCA. In general, the Plan should be guided by the following principles:

a) Retain existing vegetation and stabilize exposed soils with new vegetation, where appropriate;

b) Minimize the duration of soil exposure;

c) Minimize slope length and gradient of disturbed areas;

d) Maintain overland sheet flow and avoid concentrated flows;

e) Store/stockpile soil away (e.g. greater than 15 metres, 49 feet) from watercourses, drainage features and top of steep slopes;

f) Monitor and adjust the Erosion and Sediment Control Plan to adapt to site features.

Response: The Site Plans for the Pit 3 Extension provides detail to address erosion and sedimentation including on-going visual monitoring.

6.6.9 Landscaping and Vegetation Plans

Policy 12.4.10 states that:

Landscaping and vegetation plans may be required to illustrate how disturbed areas will be rehabilitated. The detailed requirement for landscaping and vegetation plans will depend on the nature of the application and site conditions. In general, the Plan should be guided by the following principles:

a) To the extent possible, all existing vegetation and drainage patterns should be maintained;

b) Site restoration should include native, non-invasive and locally appropriate species;

c) Where possible, the vegetation and landscaping plans should provide opportunities for connections to adjacent features, with a particular emphasis on improving connections to the natural heritage system;

d) The plans should support biodiversity;

e) The plans should conform to any applicable municipal tree preservation by-laws.

Response: The Site Plans for the Pit 3 Extension provides detail to address all the issues noted in this policy and a specific Landscape Plan has been prepared to highlight;

- How existing vegetation and drainage patterns have been maintained;
- Site restoration has included native, non-invasive and locally appropriate species;
- The vegetation and landscaping plans have provided opportunities for connections to adjacent features, with a particular emphasis on improving connections to the natural heritage system;
- The plans provide and support biodiversity;
- The plans conform to applicable municipal Tree Preservation By-Laws.

6.6.10 Summary of NPCA Policies

As noted above, no regulatory permits are required by PCQ for the Pit 3 extension from the NPCA, however, the application must still be consistent with the NPCA's Policy Document: Policies For The Administration Of Ontario Regulation 155/06 and The Planning Act including the following applicable policies:

- Policy 3.3.5 Use of Native Plant Species
- Policy 7.1.1 Hazardous Sites and Hazardous Lands
- Policy 8.0 Wetlands
- Policy 8.1.4 Environmental Impact Study
- Policy 8.1.5 Hydrological Study
- Policy 8.2.2 Development and Interference within a Wetland
  - 8.2.2.1
  - 8.2.2.2
- Policy 8.2.6 Stormwater
- Policy 9.1.1 Watercourses
- Policy 9.1.2 Need for an EIS/Hydrological Study
- Policy 10.2 Placement of Fill and Aggregate / Extractive Industrial Sites
- Policy 11.1 Municipal Drains
- Policy 12.4.4 Supporting Studies: Environmental Impact Study
- Policy 12.4.8.2 Hydrogeological Study
- Policy 12.4.9 Erosion and Sedimentation Control Plans
- Policy 12.4.10 Landscaping and Vegetation Plans

Based on the above review, it is our opinion that the Pit 3 Extension and specifically the Site Plans which have been designed based on the recommendations from the numerous technical studies, are consistent with the goals and objectives of the above noted policies of the NPCA's Policy Document: Policies For The Administration Of Ontario Regulation 155/06 and The Planning Act.

6.7 Summary of Policy Documents

As part of the planning review of the approval of the Pit 3 Extension, the following planning documents and specific relevant policies where reviewed;

i. Provincial Policy Statement 2020:
   - 1.7 Long-Term Economic Prosperity
   - 2.1 Natural Heritage
   - 2.2 Water
   - 2.3 Agriculture
   - 2.5 Mineral Aggregate Resources
   - 2.6 Cultural Heritage
   - 3.2 Human-Made Hazards

ii. Growth Plan for the Greater Golden Horseshoe 2014:
   - 3.2.7 Stormwater Management
   - 4.2.2 Natural Heritage System
   - 4.2.3 Key Hydrologic Features, Key Hydrologic Areas and Key Natural Heritage Features
   - 4.2.4 Lands Adjacent to Key Hydrologic Features and Key Natural Heritage Features
   - 4.2.6 Agricultural System
   - 4.2.8 Mineral Aggregate Resources

iii. Region of Niagara Official Plan:
   - Policy 5.B Agriculture
   - Policy 6.C Mineral Resources
   - Policy 14.D.5 Implementation

iv. City of Port Colborne Official Plan (2017):

- Policy 3.5 Agriculture
- Policy 4.1 Natural Heritage Features
- Policy 4.2 Environmental Protection Areas
- Policy 4.3 Environmental Conservation Areas
- Policy 7.3 Archaeological Resources
- Policy 8.2 Stormwater Management
- Policy 10.2 Aggregate / Extractive Industrial Sites

v. Niagara Peninsula Conservation Authority (NPCA) Policy Document: Policies For The Administration Of Ontario Regulation 155/06 And The Planning Act (2018):

- Policy 3.3.5 Use of Native Plant Species
- Policy 7.1.1 Hazardous Sites and Hazardous Lands
- Policy 8.0 Wetlands
- Policy 8.1.4 Environmental Impact Study
- Policy 8.1.5 Hydrological Study
- Policy 8.2.2 Development and Interference within a Wetland
- Policy 8.2.6 Stormwater
- Policy 9.1.1 Watercourses
- Policy 9.1.2 Need for an EIS/Hydrological Study
- Policy 10.2 Placement of Fill and Aggregate / Extractive Industrial Sites
- Policy 11.1 Municipal Drains
- Policy 12.4.4 Supporting Studies: Environmental Impact Study
- Policy 12.4.8.2 Hydrogeological Study
- Policy 12.4.9 Erosion and Sedimentation Control Plans
- Policy 12.4.10 Landscaping and Vegetation Plans

Based on our comprehensive review of all these planning policy documents and all the specific relevant policies, it is our opinion that the Pit 3 Extension and specifically the Site Plans which have been designed based on the recommendations from the numerous technical studies, are consistent with the goals and objectives of the above noted policies subject to the following amendments:

Region of Niagara Official Plan

a) Add to Section 13 the site-specific policies to permit the Pit 3 extension quarry operation.

b) Identify the subject lands on Schedule D4 - *Mineral Resources* as a Licensed Pits and Quarries.

Refer to Appendix R, attached hereto for the draft of the 'Regional Official Plan Amendment (ROPA) document.

City of Port Colborne Official Plan

- To change the designation to Mineral Aggregate Operations and add a Special Policy Area to permit the propped quarry.

Refer to Appendix S, attached hereto for the draft of the 'City of Port Colborne Official Plan Amendment (OPA) document.

The following is a summary of which technical study (via Appendix number) addressed which applicable policy.

Table 1 Policy Conformity Matrix

ETR	APPENDIX																
	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	PJR
P P S																	
1.7		*		*		*	*			*			*				
2.1								*	*		*						
2.2								*	*								
2.3		*															
2.4																	
2.5	*	*	*		*			*	*	*	*	*	*	*		*	
2.6				*		*											
3.2								*	*								
Growth Plan																	
3.3.7								*									
4.2.2								*	*		*						
4.2.3								*	*		*						
4.2.4								*	*		*						
4.2.6		*															
4.2.8								*	*	*	*	*	*				
Region of Niagara O.P.																	
5.B		*															*
6.C	*	*	*		*			*	*		*	*	*				
7.A.2.6								*									
7.B								*	*		*						
9.H.3														*			
14.D.5							*										
City of Port Colborne O.P.																	
3.5		*															*
4.1								*	*		*					*	
4.2								*	*		*						

4.3								*	*		*						
7.3				*		*											
8.2								*									
10.2	*	*	*		*	*						*	*	*			
NPCA																	
3.3.5											*						
7.1.1								*	*								
8.0								*			*						
8.1.4								*			*						
8.1.5								*			*						
8.2.2								*			*						
8.2.6								*			*						
9.1.1								*			*						
9.1.2								*			*						
10.2								*									
11.1								*			*						
12.4.4								*			*					*	

6.8 City of Port Colborne Zoning By-Law (By-Law No. 6575/30/18)

The lands are currently zoned A (Agricultural) and Environmental Conservation per the City of Port Colborne Comprehensive Zoning By-Law. In order for the existing aggregate operations to be expanded onto the subject lands an amendment to the Zoning By-Law is necessary. The lands must be rezoned from Zone A (Agricultural) to Zone MAO (Mineral Aggregate Operations) to permit the extraction of mineral aggregates.

Policy 28.2 of the City of Port Colborne Zoning By-Law states that permitted uses in Zone MAO (Mineral Aggregate Operations) include:

a) *Mineral Aggregate Operations;*

b) *Making or establishment of pits and quarries for the purpose of extracting natural materials from the earth including soil, clay, sand, gravel, stone, rock, shale and minerals;*

c) *Processing of natural materials including screening, sorting, washing, crushing, storing and other similar operations related to an extractive industrial operation;*

d) *Agricultural uses;*

e) *Uses, structures and buildings accessory thereto excepting any building or structure used for human habitation.*

Therefore, the request for zoning is as follows:

1. Amend the current A *(Agricultural)* zoning on the site and rezone the lands to MAO *(Mineral Aggregate Operations)* Zone.

2. Within the MOA zoning provisions, it specifies that "*No pit, quarry or excavation shall be made or established within 15 metres of any lot line which does not abut a public street or 90 metres of any lot line which abuts a Provincial Highway or 30 metres of any lot line which abuts any other public street".* PCQ is requesting that the 90.0 metres setback along the site's Highway 3 frontage be reduced to 30.0 metres for the following reasons:

    a. 30.0 metres is in-keeping with the Ontario Aggregate Resources Act: Provincial Standards that applies equally to all pits and quarries throughout the Province where the ARA applies,

    b. There has been no recommendations forthcoming from any of the technical studies attached hereto to support an increase in this setback,

    c. The PPS 2.5.2.1 states: "*As much of the mineral aggregate resources as is realistically possible shall be made available as close to the markets as possible*". Golder Assoc. has estimated that the potential loss/sterilization of aggregate material that would result from an increased setback back is approximately 1,700,000 tonnes. That volume is equivalent to numerous years of aggregate production and as such, is deemed to be an extremely significant volume.

    d. In ensuring that these additional rock reserves are made available, the overall site extraction will be more efficient since the necessary infrastructure (i.e., relocation of processing plant/wash plant, construction of entrance/exit and external haul road upgrades etc., and completion of site improvements to address sensitive land use issues) will all be available for a longer duration.

3. Within the overall proposed 'area to be licensed', it includes lands both within the limit of extraction and buffer lands where extraction will not be permitted. As recommended by the AIA, and to ensure the overall integrity of the property boundary is retained, and because the Site Plans will necessitate the operator to undertake and maintain those lands for monitoring, planting, etc., it is our opinion that the Licence should include all the lands shown. However, within those lands are three existing residences, (1252 Main Street, 1326 Main Street, and 1645 Second Concession Road) and they all continue to be occupied.

    To retain all three homes as ongoing viable residences, PCQ is requesting that the additional permitted use of dwelling be added to the MAO zoning that would be site-specific to each of those properties. Specifically, the permitted use would include:

    a) Dwelling, Detached
    b) Uses, structures and buildings accessory thereto.

Based on the above, a draft Zoning By-Law is attached hereto as Appendix T.

6.9 Summary of Planning Approvals

6.9.1 Planning Act

Region of Niagara Official Plan (ROP) 2014:

Regional Policy 6.C.13 states that: "Where a new pit or quarry or an extension to an existing licensed pit or quarry are to be located outside a possible aggregate area, an amendment to this Plan is required".

It is acknowledged that the Pit 3 extension lands are shown on Schedule D4 (Mineral Aggregates) as a Licensed Pits and Quarries nor as a Possible Aggregate Area. Therefore, an amendment to the Regional Official Plan (ROPA) is necessary to undertake the following:

- Add Section 13 the site-specific policies to permit the Pit 3 extension quarry operation.
- Identify the subject lands on Schedule D4 - *Mineral Resources* as a Licensed Pits and Quarries.

City of Port Colborne Official Plan (OP) 2017:

Policy 10.2 of the City of Port Colborne OP states: "The establishment of a new or an expansion to an existing mineral aggregate operation shall require an amendment to this Plan…"

Therefore an Official Plan Amendment through the City of Port Colborne is required to:

- Change the designation to Mineral Aggregate Operations and add a Special Policy Area to permit the propped quarry.

City of Port Colborne Zoning By-Law No. 6575/30/18:

The lands are currently zoned (A) *Agricultural* within the City's Comprehensive Zoning By-Law. Extraction and related uses are not a permitted use. Therefore, the lands must be rezoned to (MAO) *Mineral Aggregate Operations* in order to permit extraction and all the permitted accessory uses. This requires an amendment to the City's Zoning By-Law No. 6575/30/18.

As well, to address, site-specific Site Plan and operational requirements, the zoning will reduce the Highway 3 setback from 90.0 metres to 30.0 metres and permit the legal-conforming on-going occupancy of the existing three residences.

In addition to the above Planning Approvals under the Planning Act, PCQ also requires approval of a Class A Category 2 Licence by the Minister of Natural Resources and Forestry as processed through the Ministry of Natural Resources and Forestry.

6.9.2 Aggregate Resources Act

PCQ has also applied for a Class A, Category 2 Licence.

The Class A portion distinguishes the Licence as having an annual extraction limit exceeding 20,000 tonnes per year. The annual production volume being requested is 1,000,000 tonnes, which is significantly less that the current annual tonnage of the existing Pit 3 quarry operation (Licence 4444) which is 1,815,000 tonnes.

The Category 2 portion distinguishes the Licence as being a below water quarry. As discussed above, the quarry will operate under dry-conditions, but this will only happen as a result of the use of dewatering to lower the natural groundwater to a level below the quarry floor.

Once the Council for the City of Port Colborne has approved the OPA and the Zone Change and the Region of Niagara has approved City of Port Colborne OP and the Reginal ROPA, the Minister of Natural Resources and Forestry (MNRF) will then be in a position to issue the Licence.

6.9.3 Other Required Approvals

Although it is anticipated to not a complete list, the following are potential additional Acts and Guidelines which may be applicable to the on-going operation of the Pit 3 Extension quarry.

a) Federal Department of Fisheries and Oceans (DFO): Federal Fisheries Act (if required)
b) Ministry of Environment, Conservation and Parks (MECP):
   - Permit to Take Water
   - Sewage Discharge ECA
c) Ministry of Transportation (MTO): Entrance Permit
d) The Drainage Act
e) The Federal Fisheries Act
h) The Federal Species at Risk Act (SARA)
i) The Endangered Species Act (2007)
j) Ontario Gasoline Handling Act
k) Ontario Labour Standards Act

l) Ontario Health and Safety Act

7 Proposed Extraction Design

Extraction activities are typically divided up into several key components including: a) the start-up stage, b) the extraction operation, c) progressive rehabilitation of the extraction area, d) final rehabilitation, and e) the ultimate surrendering of the Licence. With de-watering quarry operations, although progressive rehabilitation is an ongoing activity through the creation of final side-slopes in those areas fully extracted, incremental final rehabilitation of those areas is possible since the quarry pumps must operate until the final extraction is completed. The following section provides details of the operational, progressive and final rehabilitation plans.

7.1 Start Up Activities

Prior to extraction being initiated, the following activities will occur:

a) The repair of existing perimeter fencing and/or installation of new fencing. This fencing will include perimeter fencing around the entire site that will be 1.2 metre high post and wire fence with the following exceptions:

   i. The western common boundary with Licence 4444.

   ii. A 1.2 metre high post and wire fence will be erected along the eastern limit of 1326 Main Street and along the rear limit of both 1252 and 1326 Main Street.

b) Minimum 1.2 metre high gates will be erected at the Highway 3 quarry entrance and a 1.2 metre high farm type gate will be erected midway along the Miller Road frontage with access limited to quarry staff and/or farm equipment.

c) Woodlot protection fencing will be erected along the southern edge of SWD3-2 and the eastern edge of FOD7 as per the Tree Preservation Report.

d) Once the Wignell Drain has been realigned along the eastern property limit, the remnant portion of the ditch along the southern extent of SWD3-2 will be truncated at its eastern end.

e) All required monitoring surface and groundwater wells will be installed.

f) The site has very limited overburden overlying the site, but it will be stripped and applied as a top covering to the perimeter berms which will be built primarily from on-site clay.

Specifically, all topsoil and subsoil stripped from the former Humberstone Speedway will be used exclusively for the construction of berms along the Highway 3 frontage with the exception of soil where the quality exceeds the applicable MECP Site Condition Standards. When the Phase Two ESA investigation is completed, the quality of the soil at the Site will be determined and any soil that exceeds the applicable MECP Site Condition Standards will be disposed of off-site. The Phase Two ESA investigation will be completed prior to the soil being stripped from the property.

g) Vegetation removal: Removal of FOD7-2 woodlot as per the Tree Preservation Plan.

h) Vegetation planting:

   i. Along the Highway 3 frontage,

   ii. Ecological linkages between the key natural heritage features in the study area will be improved. The area north of the existing quarry (Pit 3) and west of the northern end of the deciduous swamp shall be rehabilitated to enhance connectivity and wildlife movement between the deciduous swamp and the significant woodland located north of Second Concession Road between Carl Road and Babion Road. These two significant woodlands are separated Second Concession Road and distance of approximately 70

metres. The area to be rehabilitated consists of a berm vegetated with terrestrial grasses and forbs and a sparsely vegetated area north of Pit 3.

iii. The setback area at the north end of extraction area 3 and east of the deciduous swamp will be supplemented with additional plantings to enhance connectivity and wildlife movement opportunities between the deciduous swamp and the hedgerow located east of the site woodland located northeast of the site across Second Concession Road. This area currently consists of a cultural meadow. The establishment of a wooded area will create a corridor linking the north end of the deciduous swamp with the forested areas offsite, including the significant woodland located between Carl Road and Babion Road. These additional plantings will also enhance ecological connectivity and facilitate wildlife movement between these features. Native tree and shrub species plantings should be selected based on their suitability for the soils and moisture regime in those areas and may include: red oak, trembling aspen, eastern white cedar, red maple, basswood, bur oak, white pine, serviceberry species, gray dogwood (*Cornus racemosa*) and staghorn sumac (*Rhus typhina*).

iv. Bisecting SWD3-2 – Silver Maple Mineral Deciduous Swamp is the former Carl Road alignment. The segment of Carl Road that bisects the deciduous swamp shall be rehabilitated following the decommissioning of the road. This linear disturbance has enabled invasive plants to infiltrate the swamp interior and may be increasing predation pressure on wildlife from domestic and feral animals (cats and dogs) as well as opportunistic wild predators and scavengers that benefit from anthropogenic disturbance such as coyotes or raccoons. Excavations in three or four areas along the length of the road should be created to improve surface water drainage. Plantings along this segment of Carl Road should include the dominant tree and shrub species found in the deciduous swamp including silver maple, pin oak, swamp white oak, bur oak, red maple, and spicebush. Invasive shrub species including multiflora rose, common buckthorn, and Tartarian honeysuckle have become established in this area and may prevent the successful establishment of the native plantings. These invasive shrubs should be removed prior to the planting of Carl Road.

7.2 Extraction Operation

Extraction of the rock will commence using the existing Pit 3 (Licence 4444) quarry as the starting face and move eastward. Through the progression of three extraction phases using 2 to 3 lifts (of 8.0 metres each), extraction of Phase 1 will move toward Miller Road. The direction of extraction is noted on the Site Plans but generally it will move toward the nearest sensitive land uses so that the quarry face can always act to provide additional noise attenuation.

Depending on the blast size, blasting of the rock will occur several times per week.

The blasted rock will be hauled westward along using off-road quarry trucks along the existing haul road through Pit 3, crossing Babion Road at grade, through Pit 2, crossing Snider Road at grade and to Pit 1. In Pit 1 the rock will be processed (crushed, screened, washed) and then stockpiled using stackers into various stockpiles of varying sizes to meet specific road construction specifications. The material will then be loaded into dump trucks and hauled to the market via Ramey Road and to Highway 140.

During Phase 1 extraction, PCQ intends to construct a new processing plant within Pit 3 and which will necessitate a Pit 3 site plan amendment. This will require the extension of phase 3 power being extended from Pit 1 to Pit 3. At this location, will also be a wash plant, stockpiles and where the loading of dump trucks will occur. In conjunction with this plant being operational, PCQ will construct the new quarry entrance onto Highway 3 based on MTO design standards and include a minimum 35 metre long eastbound left-turning lane on Highway 3. To access the proposed new entrance/exit, (at grade), a ramp down to the quarry floor (+/- 16 metres deep) will be constructed. All required MTO approvals and permits will be obtained at the time of construction.

Once Phase 1 is completed, then extraction will proceed through Phases 2 and 3 moving northwards toward Second Concession Road. The extent of the limit of extraction is illustrated on the Site Plans.

Refer to Figure 4 Operational Plan.

7.3 Projected Quarry Lifespan

Based on the calculated tonnage volume total of 45 million tonnes and based on a maximum annual extraction rate of 1,000,000 tonnes, the minimum life span will be **45** years. Current production is not at this full level but PCQ is anticipating production to increase. Progressive Rehabilitation of Extraction Area

As the site is progressively extracted through the three phases, rehabilitation will also occur progressively. As shown on Site Plan Sheet 5 of 8, as each portion of the quarry is fully extracted to the final quarry floor depth, the side slopes will begin to be constructed from the top of the existing grade to the bottom of the quarry floor using:

i. on-site overburden,
ii. excess waste rock/rubble, and
iii. during the final extraction phase, the redistribution of the topsoil/subsoil within the perimeter berms.

The side slopes will range from the ARA minimum allowable slope of 2:1, (2 horizontal to 1 vertical) and increase in shallowness to 3:1 and 4:1.

As part of the backfill program, and at the proposed final lake level of 178.0 metres, PCQ will create shallow permanent ponds (wetland enhancement areas) which will provide ecological diversity for both plant life and amphibian species. Once the ponds are constructed, they will be lined with a veneer of clay to retain precipitation to become functional without having to wait until the final extraction is completed and the overall lands.

Along the perimeter of the site, and specifically within the extraction setback areas, and once the perimeter berms have been removed, the lands will be subject to rehabilitation according to the rehabilitation concept. This will encourage the growth of numerous ecological linkages along the perimeter of the lake and property boundaries.

Throughout the life of the quarry, once the side slopes are created, with the portion above 178.0 masl top-dressed with topsoil and vegetated with native legume grasses. These slopes will be monitored and if there is significant erosion of the soils and loss of vegetation, the erosion will be repaired immediately, and replanting will occur during the next suitable planning season.

Refer to Figure 5 Phasing Details Plan and Figure 6 Notes Page as well as Figure 7 Existing Conditions Cross-Sections and Figure 8 Rehabilitation Cross-Sections.

PIT 3 EXTENSION

OPERATIONAL PLAN

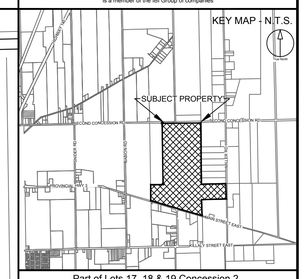
SHEET 3 OF 9

APPLICANT

PORT COLBORNE QUARRIES INC.

222 MARTINDALE ROAD, P.O. BOX 1116
ST. CATHERINES, ON, L2R 7A3

KEY MAP - N.T.S.



Part of Lots 17, 18 & 19 Concession 2,
and R.P.59R-16702 Part of Road Allowance
between Lot 18 & 19 Concession 2,
in former Township of Humberstone,
the City of Port Colborne,
Region of Niagara

LEGEND

- LOT & CONCESSION
- LICENSED BOUNDARY
- LIMIT OF EXTRACTION
- PROPOSED 1.2m HIGH POST & WIRE FENCE
- TREE PROTECTION FENCING
- MUNICIPAL DRAIN
- B' — B" — LOCATION OF CROSS-SECTION (SEE SHEETS 7 OF 9 & 8 OF 8)
- MW17–3D / MW17–3S — MONITORING WELL - EXISTING
- MW F2 — MONITORING WELL - TO BE DRILLED PRIOR TO QUARRYING
- ARCHAEOLOGICAL SURFACE FIND - INDIVIDUAL
- ARCHAEOLOGICAL SURFACE FIND - GROUPING
- 70m BUFFER FROM ARCHAEOLOGICAL FIND SPOTS (SEE ARCH. NOTE 2)
- INCREASED BLASTING MONITORING ZONE (300m FROM DWELLINGS)
- EXISTING ACCESS
- PROPOSED ACCESS
- EXISTING TREE LINE
- EXISTING BUILDING / STRUCTURE - OFF-SITE
- EXISTING BUILDING / STRUCTURE - ON-SITE
- PHASING BOUNDARY
- (2) — PHASING SEQUENCE
- INTERNAL HAUL ROUTE
- DIRECTION OF EXTRACTION
- 182.0 / 2 / 166.0 — EXISTING ELEVATION, NUMBER OF LIFTS, FINAL EXTRACTED ELEVATION
- PROPOSED 0.6m CULVERT UNDER BERM
- NEW STEEL ENTRANCE GATE

REFER TO SHEET 4 OF 9 FOR OPERATIONAL NOTES AND TO SHEET 5 OF 9 FOR ADDITIONAL OPERATIONAL NOTES.

#	DATE	BY	DESCRIPTION

SITE PLAN AMENDMENTS

2	2021.11.15	E.T.	REVISED LICENSED LIMIT & JART COMMENTS
1	2021.02.09	E.T.	AS PER MNRF PRELIMINARY REVIEW COMMENTS

REVISIONS PRIOR TO APPROVAL

SITE DATA

AREA TO BE LICENSED	± 80.34 ha
AREA TO BE EXTRACTED	± 71.12 ha
EX. DISTURBED AREA	Nil
TOTAL LAND PARCEL	± 106.29 ha

THESE SITE PLANS HAVE PREPARED UNDER THE AGGREGATE RESOURCES ACT FOR A CLASS A LICENSE, CATEGORY 2. THEY HAVE BEEN PREPARED BY THE UNDERSIGNED BY THE AUTHORITY OF MINSTERIAL APPROVAL AS SPECIFIED IN THE ARA SECTION 8 (4).

DATE: Jan.15, 2021

IBI GROUP
Suite 101 - 410 Albert Street
Waterloo ON N2L 3V3 Canada
tel 519 585 2255
ibigroup.com

PORT COLBORNE QUARRIES INC.

PIT 3 EXTENSION

SCALE: 1 : 2,500 (0 25 50 75 100m)

PROJECT NO: 115774

DRAWN BY:	CHECKED BY:
E.T.	D.R.S.
PROJECT MGR:	APPROVED BY:
D.R.S.	D.R.S.

SHEET TITLE: OPERATIONAL PLAN

SHEET NUMBER: 3 of 9

ISSUE

SCALE 1:2,500 @ 10mm

File Location: J:\115774_PortColborne\6.0 Drawings\05ptm\PIT3-EXTN\SHEETS\115774-Title_Blk.dwg Last Saved: September 8, 2021, by emma.tilley Plotted: Thursday, November 4, 2021 3:17:44 PM by Emma Tilley

PIT 3 EXTENSION

PROGRESSIVE REHABILITATION DETAILS PLAN

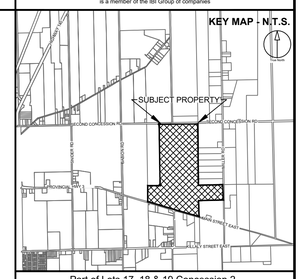
SHEET 6 OF 9

APPLICANT

PORT COLBORNE QUARRIES INC.

222 MARTINDALE ROAD, P.O. BOX 1116
ST. CATHERINES, ON, L2R 7A3

KEY MAP - N.T.S.



Part of Lots 17, 18 & 19 Concession 2,
and R.P.59R-16702 Part of Road Allowance
between Lot 18 & 19 Concession 2,
in former Township of Humberstone,
the City of Port Colborne,
Region of Niagara

Phase 1A (Subphases a - d)

a) Stripping: Prior to stripping any agricultural fields or other vegetation, refer to NEL 1 - 2 note 2 re: breeding bird habitat. The area to be stripped in advance of extraction will reflect approximately 2-3 years of anticipated extraction. The stripped topsoil and subsoil will be placed within the quarry setbacks to be used for perimeter berms and future rehabilitation of the quarry side slopes.
b) Extraction: Extraction will commence eastward from the Pit 3 face (Licence 4444) and extend to the eastern setback limit. Specifically;

i. Extraction will initially move in a south-east direction toward the proposed Highway 3 entrance / exit so that the final ramp down to the final quarry floor can be created as soon as possible to ensure that haul trucks transition immediately to the same relative elevation as the new processing plant (to be sited within Pit 3) . This will augment noise and dust mitigation impacts.

ii. Extraction will then move towards the 'east tab' towards Miller Road. Once extraction is imminent, the Licensee will comply with the Fisheries Act and any required authorization from the Department of Fisheries and Oceans including fish surveys. The Wignell Drain will be temporarily realigned to parallel the property boundary around the eastern tab.

iii. Those lands will then be stripped, extracted, and backfilled with on-site material and from PCQ contiguous lands including overburden, waste rock, clay, and/or clean-out material from the wash ponds. Subsequently, the Wignell Drain will be repositioned back to its initial location.

iv. Specific fisheries habitat related rehabilitation will be reintroduced to enhance the Wignell Drain. The Wignell Drain is being restored at the earliest stage of extraction possible to provide the maximum amount of time to monitor and ensure that the fish habitat techniques have been successful.

v. The balance (northern portion) of Phase 1A will be extracted. As this extraction occurs, ongoing rehabilitation efforts will continue to create side slopes from the quarry floor up to the existing grade using backfilled material from on-site and PCQ contiguous lands including overburden, waste rock, clay, and/or clean-out material from the wash ponds.

The extraction depth will vary from 162.0 to 166.0 masl generally following the resource which is deepest in the southwest portion of the site. Extraction occur primarily in two lifts / benches each not exceeding 8.0 metres in depth. A third partial lift may be required in the deepest portions of the quarry.

As detailed in Archaeological Note 1 and 2, portions of Phase 1A include 'no-go zone' buffers which require Stage 3 assessments to be completed in order to clear the identified archaeological sites to permit extraction.

c) Berms Construction: All berms will be constructed prior to any active extraction at the site. All berms will be constructed with a core of onsite clay overburden and be covered with a veneer of on-site subsoil and topsoil. Berm heights are noted on Sheet 3 of 8 and berm design detail sketches are shown on Sheet 5 of 8.

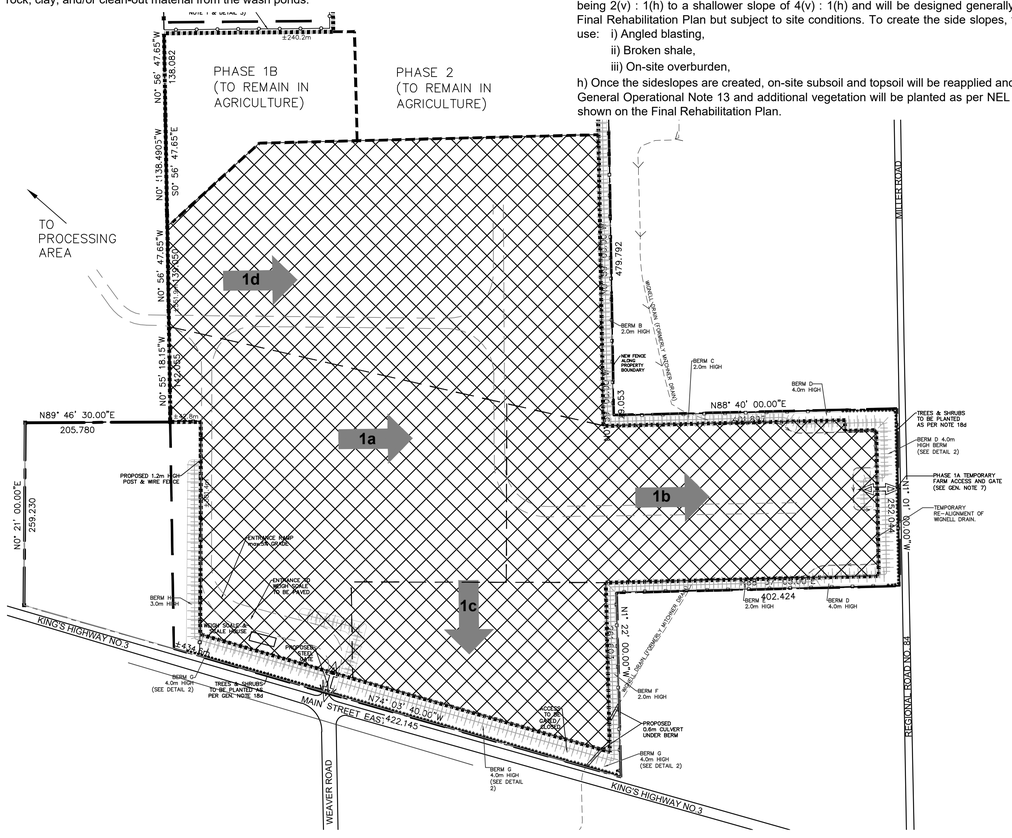
d) Berm Vegetation: All perimeter berms constructed must be immediately vegetated with a native, non-invasive grass/legume to help prevent erosion, (refer also to General Operational Note 13 and NEL 1 - 2 Note 7) to augment fugitive dust and noise and to support grassland bird habitat.

e) Processing Equipment: Although the majority of the processing equipment will be located off-site, any in-quarry portable processing equipment must be located on the lowest quarry floor or at a minimum elevation of 171.10 masl, whichever is lowest.

f) Shipping off-site: Aggregate from Phase 1A will be initially hauled westward to the Port Colborne Quarries Inc. - Pit 1 for processing via an intra-pit road network through their Pit 2 and Pit 3 lands. Once processed, (crushed, screened, blended, washed and stockpiled), the material will be shipped to the market via Second Concession Road to Highway 140. Eventually that processing plant is planned to be relocated / rebuilt within the Port Colborne Quarries Inc. - Pit 3 lands, (Licence 4444), subject to MNRF approval. Once that occurs, aggregate from Phase 1A will be processed within Phase 3 then shipped to the market via a new entrance/exit onto Highway 3. To accommodate this, an access road from the quarry floor to the 'at grade' portion of Phase 1A will be constructed.

g) Progressive Rehabilitation: As full extraction is progressively completed of portions of Phase 1A, the creation of side slopes will begin. Side slopes will range from the steepest permitted by the ARA being 2(v) : 1(h) to a shallower slope of 4(v) : 1(h) and will be designed generally as shown on the Final Rehabilitation Plan but subject to site conditions. To create the side slopes, the Licensee shall use:
i) Angled blasting,
ii) Broken shale,
iii) On-site overburden,

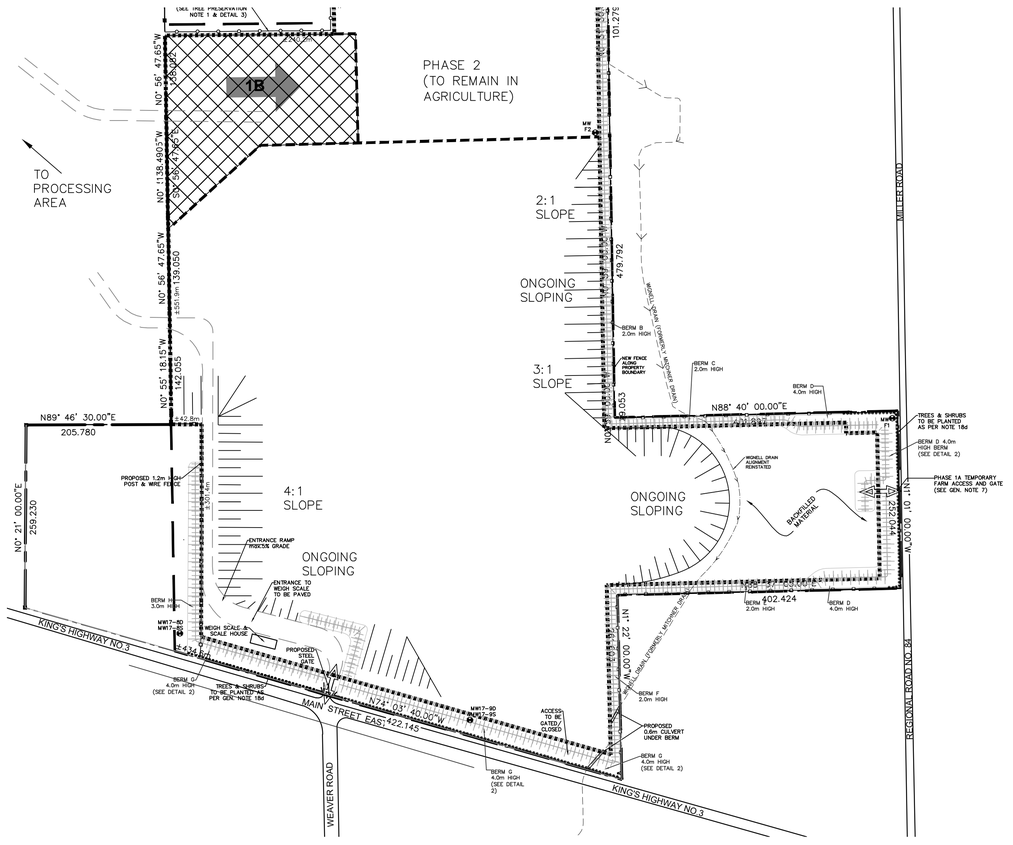
h) Once the sideslopes are created, on-site subsoil and topsoil will be reapplied and vegetated as per General Operational Note 13 and additional vegetation will be planted as per NEL 1/2 note 7 and as shown on the Final Rehabilitation Plan.



Phase 1B

a) Stripping: Prior to stripping any agricultural fields or other vegetation, refer to NEL 1 - 2 note 2 re: breeding bird habitat. The area to be stripped in advance of extraction will reflect approximately 2-3 years of anticipated extraction. The stripped topsoil and subsoil will be used immediately for progressive rehabilitation of the quarry side slopes.
b) Extraction: Extraction will commence northward from Phase 1A and extend north to the northern setback limit. The extraction depth will extent to 166.0 masl and generally following the resource depth and occur in two lifts / benches each not exceeding 8.0 metres in depth. As detailed in Archaeological Note 1 and 2, portions of Phase 1B include 'no-go zone' buffers which require Stage 3 archaeological assessments to be completed and which recommend that no further archaeological assessment is required, and then extraction may commence.
c) Processing Equipment: Although the majority of the processing equipment will be located off-site, any in-quarry portable processing equipment must be located on the lowest quarry floor or at a minimum elevation of 171.10 masl, whichever is lowest.
d) Shipping off-site: Aggregate from Phase 1B will be processed within Pit 3 then shipped to the market via the entrance/exit directly onto Highway 3.
e) Progressive Rehabilitation: As progressive extraction is completed, the creation of side slopes will continue. Side slopes will range from the steepest permitted by the ARA being 2(v) : 1(h) to a shallower slope of 4(v) : 1(h) and will be generally as shown on the Final Rehabilitation Plan. To create the side slopes, the Licensee shall use:
i) Angled blasting,
ii) Broken shale,
iii) On-site overburden,

f) Once the side slopes are created, on-site subsoil and topsoil will be reapplied and vegetated as per General Operational Note 13 and additional vegetation will be planted as per NEL 1/2 note 7 and as shown on the Final Rehabilitation Plan.

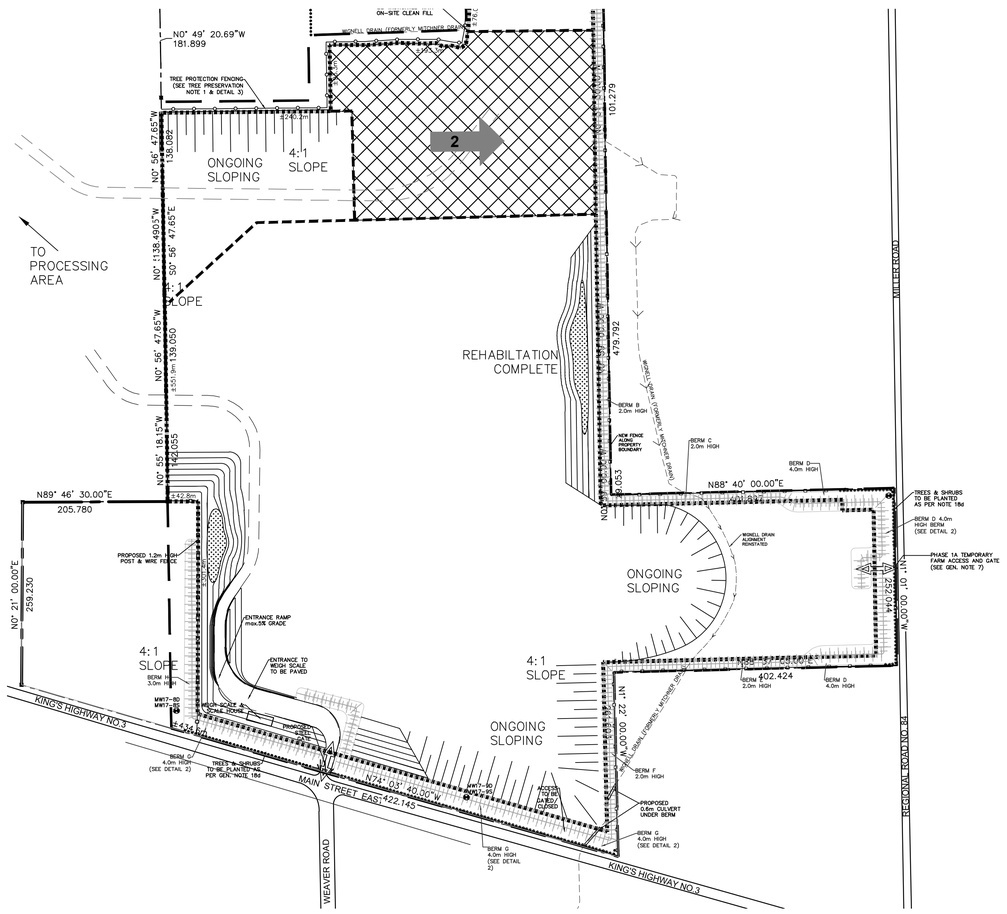


Phase 2

a) Stripping: Prior to stripping any agricultural fields or other vegetation, refer to NEL 1 - 2 note 2 re: breeding bird habitat. The area to be stripped in advance of extraction will reflect approximately 2-3 years of anticipated extraction. The stripped topsoil and subsoil will be used immediately for progressive rehabilitation of the quarry side slopes.
b) Extraction: Extraction will commence eastward from Phase 1B and extend east to the eastern setback limit. The extraction depth will extent to 166.0 masl and generally following the resource depth and occur in two lifts / benches each not exceeding 8.0 metres in depth.
c) Processing Equipment: Although the majority of the processing equipment will be located off-site, any in-quarry portable processing equipment must be located on the lowest quarry floor or at a minimum elevation of 171.10 masl, whichever is lowest.
d) Shipping off-site: Aggregate from Phase 2 will be processed within Pit 3 then shipped to the market via the entrance/exit onto Highway 3.

e) Progressive Rehabilitation: As extraction is progressively completed, the creation of side slopes will continue. Side slopes will range from the steepest permitted by the ARA being 2(v) : 1(h) to a shallower slope of 4(v) : 1(h) and will be generally as shown on the Final Rehabilitation Plan. To create the side slopes, the Licensee shall use:
i) Angled blasting,
ii) Broken shale,
iii) On-site overburden,

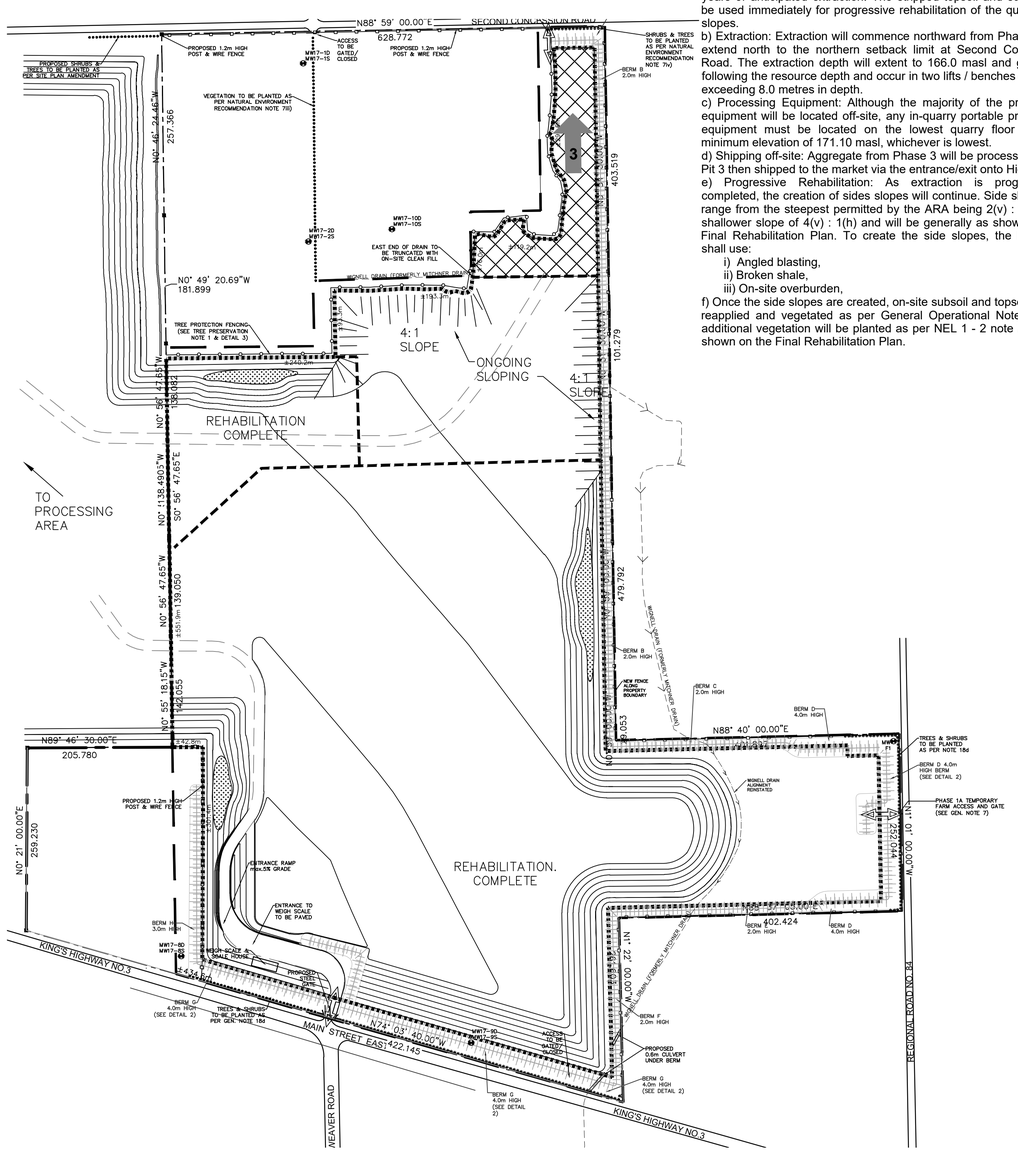
f) Once the side slopes are created, on-site subsoil and topsoil will be reapplied and vegetated as per General Operational Note 13 and additional vegetation will be planted as per NEL 1 - 2 note 7 and as shown on the Final Rehabilitation Plan.



Phase 3:

a) Stripping: Prior to stripping any agricultural fields or other vegetation, refer to NEL 1/2 note 2 re: breeding bird habitat. The area to be stripped in advance of extraction will reflect approximately 2-3 years of anticipated extraction. The stripped topsoil and subsoil will be used immediately for progressive rehabilitation of the quarry side slopes.
b) Extraction: Extraction will commence northward from Phase 2 and extend north to the northern setback limit at Second Concession Road. The extraction depth will extent to 166.0 masl and generally following the resource depth and occur in two lifts / benches each not exceeding 8.0 metres in depth.
c) Processing Equipment: Although the majority of the processing equipment will be located off-site, any in-quarry portable processing equipment must be located on the lowest quarry floor or at a minimum elevation of 171.10 masl, whichever is lowest.
d) Shipping off-site: Aggregate from Phase 3 will be processed within Pit 3 then shipped to the market via the entrance/exit onto Highway 3.
e) Progressive Rehabilitation: As extraction is progressively completed, the creation of sides slopes will continue. Side slopes will range from the steepest permitted by the ARA being 2(v) : 1(h) to a shallower slope of 4(v) : 1(h) and will be generally as shown on the Final Rehabilitation Plan. To create the side slopes, the Licensee shall use:
i) Angled blasting,
ii) Broken shale,
iii) On-site overburden,

f) Once the side slopes are created, on-site subsoil and topsoil will be reapplied and vegetated as per General Operational Note 13 and additional vegetation will be planted as per NEL 1 - 2 note 7 and as shown on the Final Rehabilitation Plan.



LEGEND

- LOT & CONCESSION
- LICENSED BOUNDARY
- LIMIT OF EXTRACTION
- EXISTING POST & WIRE FENCE
- MUNICIPAL DRAIN
- MW17-3D / MW17-3S — MONITORING WELL - EXISTING
- MW F2 — MONITORING WELL - TO BE DRILLED PRIOR TO QUARRYING
- EXISTING ACCESS
- PROPOSED ACCESS
- EXISTING TREE LINE
- EXISTING BUILDING / STRUCTURE - OFF-SITE
- EXISTING BUILDING / STRUCTURE - ON-SITE
- PHASING BOUNDARY
- 2 — PHASING SEQUENCE
- INTERNAL HAUL ROUTE
- DIRECTION OF EXTRACTION
- 182.0 / 2 / 166.0 — EXISTING ELEVATION NUMBER OF LIFTS FINAL EXTRACTED ELEVATION
- PHASED EXTENT OF EXTRACTION
- PHASED BACK FILL
- FINAL REHABILITATION CONTOUR
- FUTURE AQUATIC HABITAT

#	DATE	BY	DESCRIPTION
			SITE PLAN AMENDMENTS
2	2021.11.15	E.T.	REVISED LICENSED LIMIT & JART COMMENTS
1	2021.02.09	E.T.	AS PER MNRF PRELIMINARY REVIEW COMMENTS
			REVISIONS PRIOR TO APPROVAL

SITE DATA

AREA TO BE LICENSED	± 80.34 ha
AREA TO BE EXTRACTED	± 71.12 ha
EX. DISTURBED AREA	Nil
TOTAL LAND PARCEL	± 106.29 ha

THESE SITE PLANS HAVE PREPARED UNDER THE AGGREGATE RESOURCES ACT FOR A CLASS A LICENSE, CATEGORY 2. THEY HAVE BEEN PREPARED BY THE UNDERSIGNED BY THE AUTHORITY OF MINSTERIAL APPROVAL AS SPECIFIED IN THE ARA SECTION 8 (4).

DATE: Jan.15, 2021

IBI GROUP
Suite 101 - 410 Albert Street
Waterloo ON N2L 3V3 Canada
tel 519 585 2255
ibigroup.com

PORT COLBORNE QUARRIES INC.

PIT 3 EXTENSION

SCALE: 1 : 4,000 (0 50 100 150 200m)

PROJECT NO: 115774	
DRAWN BY: E.T.	CHECKED BY: D.R.S.
PROJECT MGR: D.R.S.	APPROVED BY: D.R.S.

SHEET TITLE
PROGRESSIVE REHABILITATION DETAILS PLAN

SHEET NUMBER	ISSUE
6 of 9	

SCALE 1:1m 10mm

File Location: J:\115774_PortColborne\5 Drawings\05Sprint\PIT-3-EXTN\SHEETS\115774-Title_Blk.dwg Last Saved: December 20, 2021, by emma.tillery Plotted: Monday, December 20, 2021 4:18:50 PM by Emma Tillery

GENERAL OPERATIONAL NOTES

1. Tonnage: It is a condition of this licence that no more than 1,000,000 tonnes of material shall be removed from this property annually and no more than 1,815,000 tonnes of material annually combined with Licence 4444, which is also operated by Port Colborne Quarries Inc. The area to be extracted is 71.1 hectares.

2. Hours of Operation:
a) The hours of operation shall be from 7:00a.m. to 7:00p.m. Monday to Friday excluding statutory holidays and 8:00a.m. to 3:00p.m. on Saturdays. At no time shall crushing, rock breaking or blasting take place on a Saturday, Sunday or Statutory Holiday, nor any blasting between the hours of 6:00p.m. and 8:00a.m. Maintenance and, where required for highway construction night contracts, only loading and scale operations may take place outside of normal operating hours.
b) Refer to the Recommendations from the Dust Study (Sheet 5 of 9) regarding further restrictions to the operational hours for drilling/blasting.

3. Fencing and Gates:
a) Prior the stripping and extraction, a minimum 1.2 metre high post and wire fence shall be in place along all external boundaries to ensure the site is secure. Site Plan Variance of Operational Standard 5.1 provides that the west boundary abutting ARA Licence 4444 will not be fenced since those lands are also owned by Port Colborne Quarries Inc.
b) A gate will be erected at the main quarry access onto the Highway 3 entrance/exit and be locked at all times when the quarry is not operational.
c) The existing entrance/exit at:
a. Humberstone Speedway onto Highway 3 will be permanently closed.
b. Former Carl Road onto Second Concession Road will be permanently closed.
d) Access to 1252 Main Street (Hwy 3) and 1326 Main Street (Hwy 3) and 1645 Second Concession Road will remain un-gated subject to the construction of additional perimeter fencing the secure the quarry lands.
e) Refer to Note 5 for farm equipment access and gates.
f) Tree Protection Fencing shall be installed around the northern woodlots, (SWD-2 and SWD3-2) as per the Recommendations from the Tree Preservation Plan (See Sheet 5 of 9).

4. Existing Buildings: Existing buildings on-site include:
i. House at 1252 Main Street (Hwy 3) to remain as it will be outside the Limit of Extraction.
ii. House at 1326 Main Street (Hwy 3) to remain as it will be outside the Limit of Extraction.
iii. House at 1645 Second Concession Road to remain as it will be outside the Limit of Extraction.
The timing of the removal of the following buildings will occur during Phase 1A:
iv. Spectator viewing stand at the Humberstone Speedway.
iii. All ancillary buildings and structures at the Humberstone Speedway.

5. Site Access:
a) Extraction Stage 1A: Haul truck access will be routed internally being west via the Port Colborne Quarries Inc. Licence 4444 (Pit 2 and 3) to the Pit 1 entrance/exit onto Ramey Road and to Highway 140.
b) Extraction Stage 2: During Phase 1A extraction and upon a new aggregate processing plant / wash plant being located within Licence 4444 (Pit 3), a new quarry entrance/exit will then be established directly onto Highway 3. All applicable entrance permits and design approvals for a deceleration lane shall be secured from the Ministry of Transportation prior to the construction and use of this access.

6. Entrance/Exit: Once the Highway 3 entrance/exit has been established:
a) A road sweeper will be maintained on-site (or within Licence 4444) and used on a year-round basis as required. The entrance and associated paved shoulders will be swept to pick up and dispose of quarry related debris at least once per week, and as frequently as conditions warrant.
b) A steel grating system will be installed at the weigh scale area, and cleaned regularly.
c) The scale entry and exit areas will be paved for a minimum distance to the weigh scale to minimize dust/mud drag-out on truck tires.

7. Farm Access Farm equipment will access the site as follows:
a) Phase 1A through a 4.0 metre wide maximum gap in the Miller Road berm. The gap will be located generally at the mid-frontage point of Miller Road. The farm access will be gated and locked except when required for use by quarry employees or farming use. The berm gap will remain until farming ceases in Phase 1A and then the gap will be backfilled to match the height and slope of the remainder of the Miller Street berm.
b) Phases 1B, 2 and 3 via 1645 Second Concession Road, a locked gate will be erected at the west end of Berm 1.
8. Internal Haul Road: Internal haul routes will be constructed and disbanded as required to access the active quarry face. The location of the internal roads shown on the Site Plans are general and anticipated but will vary depending on changing site conditions and truck traffic flow requirements.

9. Weigh Scale: The weigh scale to be used for this Licence will initially be located off-site at the Port Colborne Quarries Inc. Pit 1. During Phase 1A extraction, once a new processing plant is relocated to Licence 4444 (Pit 3), a weigh scale and scale house will be established near the Highway 3 entrance/exit generally as shown on the Site Plans.

10. Groundwater Status: The groundwater elevation across the site has been determined by Golder to be approximately 178.0 masl.

11. Scrap: No scrap will be stored on-site but will be stored either in the Port Colborne Quarries Inc. Pit 1 or within Licence 4444 (Pit 3).

12. Fuel Storage: Fuel Storage: There will be no on-site fuel storage. Fuel storage will continue to be located in the Port Colborne Quarries Inc. Pit 1. Portable equipment within the quarry (i.e., crushers, screeners, generators, etc.) will be refueled by a mobile fuel truck or equivalent and follow all applicable Liquid Fuels Handling code requirements.

13. Equipment: Site preparation, extraction and rehabilitation on the site will be undertaken using scrapers, front-end loaders, haul trucks, dozers, excavators, drill-rigs etc. as necessary. As well, portable crushers, screener may be used on occasion at the quarry face.

14. Tree Removal: Any trees removed within the Limit of Extraction will be either:
i. Chipped with the material distributed within proposed vegetation zones,
ii. Burned on-site subject to an applicable municipal burn permit,
iii. Cut and re-located to the quarry sideslopes within the aquatic habitat littoral zones to facilitate post-extractive fish habitat.

15. Topsoil/Subsoil/Overburden Stripping:
a) In advance of exraction, a sufficient area of topsoil, subsoil and overburden will be stripped to allow for approximately 2-3 years of extraction. The stripped topsoil, subsoil and overburden will be used for:
i) Berm construction
ii) Rehabilitation of final quarry slopes
b) Topsoil or subsoil originating from the former Humberstone Speedway shall be used for the construction of berms along the Highway 3 frontage with the exception of soil where the quality exceeds the applicable MECP Site Condition Standards. When the Phase Two ESA investigation is completed, the quality of the soil at the Site will be determined and any soil that exceeds the applicable MECP Site Condition Standards will be disposed of off-site. The Phase Two ESA investigation will be completed prior to the soil being stripped from the property.

16. Perimeter Berms: Perimeter berms will be constructed to provide attenuation for noise, dust and visual impacts. The core of the berms will be constructed of overburden clay from the site and then a veneer of subsoil and topsoil applied to the berms. The berms will then be vegetated as specified in General Operational Note 18. If moderate or extensive erosion or gullying occurs during the life of the quarry, that portion is to be re-graded and reseed as necessary. The external (public) side of the berms fronting onto Highway 3 and Miller Road will be constructed with a 4:1 slope and maintained (cut) on a regular basis. The berms will be constructed to the heights noted on the Plan and as noted in the Visual Impact Assessment Recommendations. Refer also to Berm Sketch - Detail 2, 3 and 4 on Sheet 4 of 9.

17. Quarry Sideslopes:
a) Quarry sideslopes will vary from a maximum 2:1 slope and increase to 3:1 - 4:1 slope generally within those areas shown on the Plan.
b) The Licensee will create the side slopes by:
i) Angled blasting,
ii) Use of broken shale,
iii) On-site overburden,

18. Vegetation:
a) All berms shall be seeded as per the Level 1 and 2 Natural Environment Report Recommendations (See Sheet 5 of 9).
b) All rehabilitated side slopes are to be vegetated with native, non-invasive seed mixture capable of:
- Rapid germination and growth,
- Controlling erosion.
- Maintaining or enhancing soil fertility.

c) The seeding is to be established in a timely manner and if necessary, facilitated by the application of fertilizer, water and/or additional seeding.
d) During the start-up stage of Phase 1 the Licensee will plant a mixture of native deciduous and coniferous trees (red maple, sugar maple, elm, black oak, white pine, black walnut, white pine and black spruce) along the Highway 3 frontage and Miller Street frontage to create a long-term shade canopy. The tree stock at the time of planning shall be:
- for coniferous a minimum of 1.5 metres in height and
- for deciduous trees, a minimum of 55 mm cal.

e) 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).

19. Benching: The maximum blasting depth will be approximately 8.0 metres resulting in two (2) excavation benches. In locations where the rock continues deeper, a shallower third bench may be required.

20. Direction of Extraction: Extraction of each phase shall be in the direction as shown on the plan, with an intent to be working towards the nearest sensitive receiver.

21. Aggregates Processing: Aggregate processing will initially occur off-site in the Port Colborne Quarries Inc. Pit 1. During Phase 1A extraction, the processing plant and wash plant will be relocated to Licence 4444 (Pit 3) and to accommodate this, a Site Plan amendment for Licence 4444 will be initiated. A conveyor system may be used to transport material within the subject lands to Licence 4444. As well, a portable crusher / screener may be used on occasion at the quarry face but any such equipment and/or stockpiles shall be located a minimum of 30.0 metres from all property boundaries.

22. Stockpiles: Aggregate stockpiles will be located primarily off-site however, when limited processing does occur at the quarry face, it shall occur on the lowest quarry floor available and be adjacent to the active quarry face and not exceed 20.0 metres in height.

23. On-Site Equipment: Proposed extraction equipment to be used on site is defined by the Noise Assessment as noted under the Technical Recommendations.

24. Recycling: Recycling of asphalt and concrete will not be permitted on this site.

25. Dust Control: Dust will be mitigated on-site as per the Air Quality Assessment as noted under the Technical Recommendations.

26. Blasting: Blasting impacts will be mitigated as per the Blast Impact Analysis as noted under the Technical Recommendations. Blasting will occur as required to provide a suitable inventory, but on average approximately twice per week.

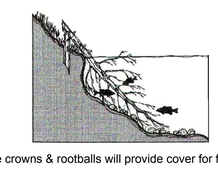
27. Final Quarry Elevation: The final quarry floor will vary from 162.0 masl at the south limit to 169.0 masl at the north. The quarry floor will blend in with the quarry floor for Licence 4444 which will be at approximately 166.0 masl.

28. Extraction Area: The total area to be extracted is 71.1 hectares.

29. Refer to Sheet 7 of 9 and 8 of 9 for cross sections.

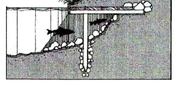
30. Refer to Sheet 6 of 9 for progressive extraction and progressive rehabilitation details.

DETAIL 1
WETLAND ENHANCEMENT FEATURES



A: Submerging tree crowns & rootballs will provide cover for fish along the shore line.

B & C: Cribs can provide both feeding and cooler areas for fish.



D: Structures such as this can be constructed out of scrap lumber.

DETAIL 2
SKETCH OF BERM ABUTTING BOTH HIGHWAY #3 AND MILLER ROAD.

RECOMMENDATIONS FROM TECHNICAL REPORTS

Noise (Acoustical) Impact Study, Golder Associates Inc., dated December 2020

1. The following minimum perimeter berms (or acoustically equivalent measures/barrier) will be implemented prior to extraction:
- A 4 metre high (above existing grade) berm along the south property line.
- A minimum 2 metre high (above existing grade) berm along the east and north property lines of the extension area.

Refer to Visual Impact Assessment Recommendations for maximum berm heights.

2. The location of the berms is shown on the Operational Plan. In addition to 1 above, specific berm requirements, including additional required berm heights, will be determined through both noise and blast monitoring as the areas of extraction move towards the Points of Reception (PORs) as shown on the Operational Plan within the 'Increased Blast Monitoring Zone'.

3. Areas requiring additional and/or specific noise controls and/or quieter types of equipment are shown on the Operational Plan as 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)

4. Extraction and processing operations will occur only during the daytime period (7:00 am – 7:00 pm).

5. The general extraction progression to be followed is shown on the Operational Plan.

6. Setback distances between the drilling rig / blasting and receptors will be determined/confirmed through the blast monitoring program.

7. All existing on-site/ external perimeter berms shall remain in place for the Port Colborne Quarries Inc.: Pit 1, Pit 2 and Pit 3 lands.

8. Extraction equipment will not exceed the following Overall Sound Power Levels Equipment list.

Source Description	Overall Sound Power Levels (dBA)
Screen 115E - Upper deck west	127
Screen 115E – Lower deck west	127
Screen 115E – Upper deck east	123
Screen 115E – Lower deck east	123
Impact Crusher 177 - west	104
Impact Crusher 187 - east	104
Jaw Crusher Norberg	110
Impact Crusher 154	104
Wash plant 155E – west screen top	111
Wash plant 155E – west screen walls	107
Wash plant 155E – east screen top	111
Wash plant 155E – east side walls	107
Drill	121
Loader Extraction	107
Haul Truck empty	112
Haul Truck full	116
Highway Truck	102

9. On-site haul trucks will not exceed 35 km/h.

10. Equipment will be maintained in good condition.

11. On-site roadways will be maintained to limit noise resulting from trucks over ruts and pot-holes.

Agricultural Impact Assessment, Colville Consulting Inc., dated September 2020

1. Excess topsoil not required for berm construction or post-extractive rehabilitation and which would be otherwise displaced, shall be available for re-use to improve the agricultural conditions for cultivation at other locations where opportunities exist.

2. Lands not immediately required for extraction shall remain available for agricultural production when possible.

3. The licensed boundary area should be aligned with existing property boundaries where possible.

4. Appropriate buffering abutting agricultural lands shall employ such things as:
a) Vegetated berms, which can offer both visual and physical buffers,
b) Dust suppression techniques and noise management according to appropriate regulations.

5. 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 shall be provided.

6. Perimeter fencing shall be established to minimize the potential for trespass and vandalism.

7. 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).

8. 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.

9. 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.

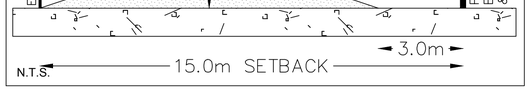
10. The Licensee shall ensure that quarry signage on Main Street (Highway 3) includes a phone number for neighbours to call if any issues should arise.

11. The Licensee shall ensure that all MOECC standards regarding blasting, noise and dust emissions are met.

12. The Licensee shall use non-invasive, native plant species for berm plantings and other landscaped features surrounding the quarry operation.

DETAIL 3
SKETCH OF BERM ABUTTING PROPERTY BOUNDARY WITH WIGNALL DRAIN.

DETAIL 4
SKETCH OF BERM ABUTTING OTHER PROPERTY BOUNDARIES.



PIT 3 EXTENSION

OPERATIONAL NOTES PLAN

SHEET 4 OF 9

13. The Licensee shall document any complaints involving the local agricultural community and annually, confirm to MNRF how they were resolved.

Air Quality Assessment, Golder Associates Inc., dated December 2020

1. 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.

2. The amount of material handling at the extraction face will be reduced to less than 4,500 kg 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.

3. The licensee shall use water as a dust suppressant to control fugitive emissions as necessary and during dry periods.

4. 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.

Archaeological Assessment, Stage 1 and 2, Golder Associates Inc., dated July 2020

1. The archaeological sites on the attached Site Plan identified as Location 1 (AfGt-296), Location 17 (AfGt-305), Location 25 (AfGt-307), Location 30 (AfGt-308), Location 31 (AfGt-309), Location 32 (AfGt-312), Location 33 (AfGt-313), Location 35 (AfGt-314) and Location 36 (AfGt-315) and Location 38 (AfGt-316) have been determined to have further cultural heritage value or interest. As such, they have been recommended to undergo Stage 3 archaeological assessment prior to any intrusive activity that may result in their destruction or disturbance. The Stage 3 assessments must be conducted in accordance with the Ministry of Heritage, Sport, Tourism and Culture Industries' (MHSTCI) *Standards and Guidelines for Consultant Archaeologists* to define the extent of each site, gather a representative sample of artifacts, and aid in determining the need for Stage 4 mitigation of impacts.

2. Until such time that Location 1 (AfGt-296), Location 17 (AfGt-305), Location 25 (AfGt-307), Location 30 (AfGt-308), Location 31 (AfGt-309), Location 32 (AfGt-312), Location 33 (AfGt-313), Location 35 (AfGt-314), Location 36 (AfGt-315), and Location 38 (AfGt-316) can undergo the recommended Stage 3 assessments, the sites shall be avoided and protected by establishing "no-go" zones consisting of the sites plus a 70 metre protective buffer as shown in the attached Site Plan.

3. Should the Stage 3 archaeological assessments of Location 1 (AfGt-296), Location 17 (AfGt-305), Location 25 (AfGt-307), Location 30 (AfGt-308), Location 31 (AfGt-309), Location 32 (AfGt-312), Location 33 (AfGt-313), Location 35 (AfGt-314), Location 36 (AfGt-315), and Location 38 (AfGt-316) result in a recommendation for Stage 4 mitigation of impacts, the site in question will require the development and implementation of either a long-term avoidance and protection plan to preserve the site intact, or development and implementation of an archaeological excavation plan to recover and document the portion of the site to be impacted. The development of any Stage 4 mitigation strategy must involve the engagement of interested Indigenous communities

4. The protected sites must be fenced (post and wire) prior to commencing extraction.

5. All alterations are prohibited within the limits of the protected areas of the sites until such time that the MHSTCI has entered a report(s) in the Ontario Public Register of Archaeological Reports where the report(s) recommends that the archaeological site is of no further cultural heritage value or interest.

6. Any archaeological site that is of further cultural heritage value or interest that remains within the licensed area at the time of surrender of the licence will be protected through a restrictive covenant on title.

7. Overall Quarry Site: Should previously unknown or un-assessed deeply buried archaeological resources be uncovered during the development, they may be a new archaeological site and therefore subject to section 48 (1) of the Ontario Heritage Act. The proponent or person discovering the archaeological resources must cease alteration of the site immediately and engage a licensed archaeologist to carry out archaeological fieldwork, in compliance with section 48 (1) of the Ontario Heritage Act.

8. Any person discovering human remains must immediately notify the police or coroner and the registrar of cemeteries, Ministry of Government Services. All work in the vicinity of the discovery will be suspended immediately. Other government staff may be contacted as appropriate; however, media contact shall not be made in regard to the discovery.

Blast (Vibration) Impact Assessment, Golder Associates Inc., dated July 2020

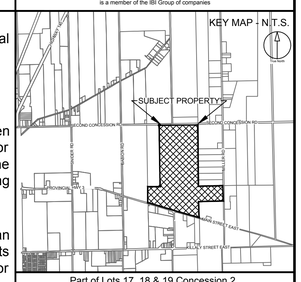
1. The initial series of test blasts, occurring with approximately one month of the commencement of blasting shall be monitored at a minimum of five (5) locations at varying distances from each blast to refine the ground and air vibration attenuation characteristics and confirm that MECP - NPC 119 of 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.

2. 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.

3. 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.

continued on Sheet 5 of 9 - Additional Operational Notes Plan

APPLICANT
PORT COLBORNE QUARRIES INC.
222 MARTINDALE ROAD, P.O. BOX 1116
ST. CATHERINES, ON, L2R 7A3



Part of Lots 17, 18 & 19 Concession 2, and R.P.59R-16702 Part of Road Allowance between Lot 18 & 19 Concession 2, in former Township of Humberstone, the City of Port Colborne, Region of Niagara

#	DATE	BY	DESCRIPTION
SITE PLAN AMENDMENTS			
3	2022.01.13	J.M.	NOTE AND DESIGN CHANGES AS PER JART COMMENTS
2	2021.11.15	E.T.	REVISED LICENSED LIMIT & JART COMMENTS
1	2021.02.09	E.T.	AS PER MNRF PRELIMINARY REVIEW COMMENTS
REVISIONS PRIOR TO APPROVAL			

SITE DATA

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AREA TO BE EXTRACTED	± 71.12 ha
EX. DISTURBED AREA	Nil
TOTAL LAND PARCEL	± 106.29 ha

THESE SITE PLANS HAVE PREPARED UNDER THE AGGREGATE RESOURCES ACT FOR A CLASS A LICENSE, CATEGORY 2. THEY HAVE BEEN PREPARED BY THE UNDERSIGNED BY THE AUTHORITY OF MINSTERIAL APPROVAL AS SPECIFIED IN THE ARA SECTION 8 (4).

DATE: Jan.15, 2021

IBI GROUP
Suite 101 - 410 Albert Street
Waterloo ON N2L 3V3 Canada
tel 519 585 2255
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PORT COLBORNE QUARRIES INC.

PIT 3 EXTENSION

SCALE: 1 : 2,500 (0 25 50 75 100m)

PROJECT NO: 115774

DRAWN BY:	CHECKED BY:
E.T.	D.R.S.
PROJECT MGR:	APPROVED BY:
D.R.S.	D.R.S.

SHEET TITLE
OPERATIONAL NOTES PLAN

SHEET NUMBER
4 of 9

ISSUE

SCALE 1:1 ON 841mm

File Location: J:\115774_PortColborne\3-5 Drawings\SiteSpecific\PIT 3-EXTN\SHEETS\115774-Title_Blk.dwg Last Saved: January 18, 2022 by joanne.mcCallum Plotted: Tuesday, January 18, 2022 8:50:22 AM by Joanne McCallum

4. Prohibit blasting on Saturdays, Sundays and Statutory holidays.

5. 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.

6. Detailed blast records shall be maintained and shall include the following:
a) Location, date and time of the blast;
b) Dimensioned sketch including photographs, if necessary, of the location of the blasting operation, and nearest point of reception;
c) Physical and topographical description of the ground between the source and the receptor location;
d) Type of material being blasted;
e) Sub-soil conditions, if known;
f) Prevailing meteorological conditions including wind speed in m/s, wind direction, air temperature in °C, relative humidity, degree of cloud cover and ground moisture content;
g) Number of drill holes;
h) Pattern and pitch of drill holes;
i) Size of holds;
j) Depth of drilling;
k) Depth of collar (or stemming);
l) Depth of toe-load;
m) Weight of charge per delay;
n) Number and times of delays;
o) The results and calculated value of Peak Pressure Level in dBL and Peak Vibration in mm/s;
p) Applicable limits; and
q) The excess, if any over the prescribed limit.

Flyrock Assessment by Golder Associates Inc., dated December, 2021

1. The Licensee shall undertake an assessment of proposed blast design(s) for flyrock potential using an industry standard flyrock model which must be conducted:
a) Prior to commencement of blasting.
b) Following required future modifications of the blast design.
2. The Licensee shall ensure that the orientation of each blast is to direct flyrock away from residences.
3. The Licensee shall provide training of drilling and blasting to crew(s) to ensure they understand the PCQ's approach to flyrock prevention.
4. The Licensee shall provide quality control of drilling and blasting operation by:
a) Prior to loading any shot, blast designs shall be reviewed and approved by an engineer with experience in quarries and blasting.
b) Drilling accuracy and deviation will be monitored. The use of face mapping tools (e.g., laser contouring) is required to ensure that face burdens are controlled.
c) The use of high-speed video is required to enable estimation of the fragment launch velocity which will be used in the refinement of flyrock models (i.e., bench top and bench face).
d) Detailed drill logging program will be designed. Anomalies indicating potential problematic zones will be recorded and communicated to the blasting supervisor so that measures can be taken to prevent the potential impact of those zones.
e) The blast site will be reviewed to ensure compliance with the detailed drill program design.
f) All blasts will be videoed and reviewed to ensure blast performance quality.
g) Periodic third-party audits must be carried out twice per year, to compliment continuous quality control.

Hydrological Study by Golder Associates Inc., dated October 2020

1. All monitoring requirements with respect to the quarry discharges and the receiving system will be regulated by the Industrial Sewage Works Environment Compliance Approval, (MECP) to be amended prior to the dewatering of Pit 3 Extension.

2. The increased runoff under operational and rehabilitated conditions will be directed to the east and west branches of the Wignell drain, increasing the annual flows within these water features.

Hydrogeological Study by Golder Associates Inc., dated October 2020

1. The following existing on-site monitoring wells shall be monitored with groundwater levels taken monthly and water quality samples taken every five years. Groundwater quality parameters to be tested for include;

General Chemistry:	pH, EC, TDS, Hardness
Nutrients/Organic Indicators:	Total ammonia, Nitrate, Nitrite, DOC, Orthophosphate
Major and Minor Ions:	Alkalinity, calcium, chloride, magnesium, potassium, sodium, sulphate, anion sum, cation sum.
Dissolved Metals:	aluminum, antimony, arsenic, barium, beryllium, boron, cadmium, chromium, cobalt, copper, iron, lead, manganese, molybdenum, nickel, phosphorous, selenium, silicon, silver, strontium, thallium, titanium, uranium, vanadium, zinc.

Monitoring Well Number

MW17-1S,	MW17-1D,
MW17-2S,	MW17-2D
MW17-3S,	MW17-3D
MW17-4S,	MW17-4D
MW17-5S,	MW17-5D,
MW17-6S,	MW17-6D
MW17-7S,	MW17-7D
MW17-8S,	MW17-8D
MW17-9S,	MW17-9D,
MW17-10S,	MW17-10D

2. Three additional monitoring wells are to be installed prior to quarrying and are shown on the Site Plans and include; i) on the Second Concession Road frontage mid-way along the northern limit of extraction, ii) mid-way along the eastern property boundary and iii) at the northern extent of the Miller Road frontage. These wells will be also be monitored at the same frequency as the existing wells.

3. The results of the Groundwater Quality Monitoring will be used to evaluate potential changes in water quality as the proposed quarry expands. The groundwater level monitoring will be used to assess the groundwater level drawdown associated with quarry dewatering as the quarry expands. The monitoring program will be used to evaluate potential impacts on surrounding wells and used as part of the hydrogeological and ecological disciplines to confirm no unanticipated effects on the natural environment.

4. In order to implement appropriate response actions in a timely manner, the Licensee will retain qualified personnel in the areas of hydrogeology and will have water well contractors and a plumbing contractor on retainer in the event that the need for these services arises.

5. The monitoring program will be discontinued once the quarrying is completed and the quarry will be allowed to flood through natural surface water and groundwater inflows, and the groundwater will recover to static conditions.

Private Well Complaints Response Program

The following description provides the decision process to be followed when a well interference complaint is received.

1. The well will be inspected by a Hydrogeologist and/or a Licensed Well Contractor to initially evaluate the complaint. An analysis and impact assessment will then be conducted by a Hydrogeologist to evaluate potential impacts for groundwater level drawdown to affect the water supply of the well. An assessment of the well system performance will then be carried out by the Hydrogeologist and Contractor.

2. If it is determined by a Hydrogeologist that there is a significant potential for interruption of the water supply of the well or the water supply of the well has been interrupted, then the water supply restoration program will be initiated. If the initial measures are not successful, then mitigation measures will be implemented in the interim until a successful response is achieved. This could involve the implementation of additional contingency measures until a successful result is achieved.

3. If there is no significant potential for the interruption of water supply, then no restoration action will be undertaken, and the temporary water supply will be discontinued. The actions and responses undertaken, as determined by a Hydrogeologist, will be documented for the annual report, and reported to the agencies as required.

Potential Mitigation Options

There are several mitigation strategies that could be implemented to affect the supply of surrounding water wells, to counteract the effect of quarry-related groundwater level drawdown, if required, based on the results of the monitoring and complaints response program.

1. Well Deepening: This would be effective, for example, for shallow bedrock wells that no longer have a sufficient water column due to quarry-related groundwater level drawdown. The results of the hydrogeological program indicate that well deepening is feasible, since water supply is obtained from duplicate private water wells and municipal wells.

2. Well Replacement: This measure could be introduced for wells where well deepening was not sufficient and could also be positioned further from the quarry.

3. Additional Wells: Additional wells could be installed and connected by plumbing into the residence by piping as such that there is a common feed of water from multiple wells.

4. Trickle Wells: This would involve the pumping of the well into a storage system such as a subsurface cistern.

5. Grouting: The bedrock along the quarry wall could be grouted to seal the fractures and remove the hydraulic connection to adjacent wells.

6. Low Permeability Sid Slopes: The quarry walls could be sloped with low permeability clayey materials to line the fractures on the quarry wall.

7. Recharge Wells: Recharge wells could be installed to maintain groundwater levels in areas affected by groundwater level drawdown.

The requirement for any of these mitigation measures would be determined based on the results of the groundwater monitoring program. The results of the monitoring and response program will be incorporated into a report that will be submitted to the MECP on an annual basis as part of the future requirements for a site-wide Permit to Take Water (PTTW).

Natural Environment Report, Golder Associates Inc. dated October 2020

1. Setbacks: All extraction setbacks for Phases 1B, 2 and 3 shall be clearly demarked where they are contiguous to environmental features and specifically those identified as CVR4, FOD7, CUM1-1, FOD7-2, SWD3-2.

2. Bird Breeding Habitat: The Licensee shall avoid vegetation removal including agricultural fields during the active breeding season for birds between April 15 and August 15 unless construction disturbance is preceded by a nesting survey. If nests are found, a buffer will be installed around the nest and not removed until young have fledged the nest.

Prior to removal of vegetation in agricultural fields, the Licensee shall confirm that there is no suitable habitat for bobolink or eastern meadowlark present. If present, permitting under the ESA may be required to remove the habitat.

All vegetation communities with the potential to provide nesting sites to migratory birds will require nesting surveys if they are removed between April 15 and August 15th. This will include the FOD7-2 in extraction area 2, the CUM1-1 in extraction area 3 north of the FOD7-2, and the CUM1-1 in extraction area 1A around the Humberstone Speedway. If areas of the open agricultural lands have transitioned into fallow post-agricultural lands, nesting surveys will also be required in those areas if clearing is to take place during the nesting season.

3. Fish Habitat: The ponds within the former Humberstone Speedway lands may contain fish, and if present, they shall be removed prior to dewatering and/or destruction of the ponds. This will require a MNRF permit to collect fish and it shall be obtained prior to relocation to avoid contravention of the federal Fisheries Act. Any native fish present are to be relocated to suitable nearby habitat and non-native fish are to be euthanized.

4. Sediment/Erosion Control: Sediment and erosion control measures shall be implemented prior to and during construction, and be implemented throughout the entire site, specifically in areas adjacent to the deciduous swamp and the East Wignell Drain. This may include the use of silt fencing, check dams, straw bales, rip-rap and/or other techniques when and where as required.

5. Noise and Dust Mitigation: Appropriate noise and dust mitigation measures shall be implemented during both site preparation and during the extraction operation.

6. Wetland Vegetation Monitoring Program: A 'Wetland Vegetation Monitoring Program' shall be implemented to monitor the deciduous swamp to accurately monitor any changes in the wetland community over time and to measure the success of management actions. These long-term monitoring plots and/or monitoring transects shall be established to include a count of the number of stems and percent cover for all plant species present. Baseline monitoring shall be conducted in the year prior to the commencement of extraction of Phase 1B or 2, whichever occurs first. Monitoring shall be conducted annually at a similar time of year (i.e., late July) for the duration of extraction of Phases 1B, 2 and 3.

For all plants identified as part of Wetland Vegetation Monitoring Program, they shall be categorized by the wetness index based on the Floristic Quality Assessment System for Southern Ontario.

The groundwater monitoring program results and specifically the groundwater drawdown levels and surface groundwater monitoring results will aid in demonstrating any potential impacts to the wetland function.

Annually, the results of the Wetland Vegetation Monitoring Program will be a submitted to MNRF prior to December 31 and available to the Region of Niagara, NPCA and City of Port Colborne upon request.

The monitoring program will also include annual breeding bird surveys and anuran call count surveys within the deciduous swamp following the same methods used for the NEL1/2 baseline studies. The purpose of the wildlife monitoring is to document whether the proposed extraction activities negatively impact species diversity and abundance. Monitoring should be conducted for the duration of extraction Phases 1B, 2 and 3.

Following rehabilitation, anuran call count surveys will be completed within the wetland habitat around the periphery of the extraction area to evaluate the success of these features as breeding habitat for amphibian. Monitoring will be conducted for a period of three years. Following rehabilitation, the wetland habitat will be evaluated for suitability as snapping turtle foraging and overwintering habitat. Because it cannot be determined how long it may take for snapping turtles to colonize the habitat, the evaluation will focus on the suitability of the habitat rather than the presence or absence of snapping turtles. However, any turtles observed will be documented.

7. Proposed Vegetation:

i) Wetland and aquatic plants that may be planted in the nearshore or shoreline areas will include shrubs such as red-osier dogwood (*Cornus sericea*) and slender willow (*Salix petiolaris*), and herbaceous plants such as water plantain (*Alisma plantago-aqs* species listed above) will be planted in water ±0.15 metres deep and extend ±5 metres from the shore and be interspersed with cover structures (e.g., boulders and root wads) in the shallow shoreline wetland areas. Organic material and topsoil will be added to the shoreline areas to promote shoreline vegetation. Basking logs, nesting platforms and boxes will be created for turtle, waterfowl and swallows respectively. This habitat will be designed to be suitable as snapping turtle aquatic habitat and bullfrog breeding habitat.

ii) Upland areas will be seeded with a mix of grasses and legumes consisting of native, non-invasive species. The removal of existing habitat for Monarch can be offset by incorporating common milkweed where appropriate. It is recommended that common milkweed be planted in upland areas to provide host plants for monarch caterpillars. Where terrestrial nodal plantings are included *onuatica*, lake sedge (*Carex lacustris*), swamp milkweed (*Asclepias incarnata*), softstem bulrush (*Schoenoplectus tabernaemontani*), and common cattail (*Typha* spp.). Shallow wetland habitats will be created through construction of submerged benches, approximately 0.25 to 0.75 metres deep. Shallow emergent marsh vegetation (i.e., herbaceou the side slopes, they will include a mixture of coniferous and deciduous tree species to promote species diversity and provide a variety of species to compensate for any substrate deficiencies. The species may include white pine, sugar maple, red oak, trembling aspen, and white birch, with a secondary focus on species such as choke cherry (*Prunus virginiana*), alternate-leaved dogwood (*Cornus alternifolia*), highbush cranberry (*Viburnum opulus*), nannyberry (*Viburnum lentago*) and serviceberry (*Amelanchier* spp.). It is recommended that ash (*Fraxinus* spp.) species in rehabilitation plantings be avoided due to the invasion of emerald ash borer.

iii) The segment of Carl Road that bisects the deciduous swamp is to be rehabilitated following the decommissioning of the road. Excavations in three or four areas along the length of the road shall be created to improve surface water drainage. Plantings along this segment of Carl Road shall include the dominant tree and shrub species found in the deciduous swamp including silver maple, pin oak, swamp white oak, bur oak, red maple, and spicebush.

Invasive shrub species including multiflora rose, common buckthorn, and Tartarian honeysuckle have become established in this area and may prevent the successful establishment of the native plantings. These invasive shrubs shall be removed prior to the planting of Carl Road.

iv) The setback area at the north end of extraction area 3 and east of the deciduous swamp (Licence 4444) be supplemented with additional plantings to enhance connectivity and wildlife movement opportunities between the deciduous swamp and the hedgerow located east of the site woodland located northeast of the site across 2nd Concession Road. This area currently consists of a cultural meadow. The establishment of a wooded area will create a corridor linking the north end of the deciduous swamp with the forested areas offsite, including the significant woodland located between Carl Road and Babion Road. These additional plantings will also enhance ecological connectivity and facilitate wildlife movement between these features. Native tree and shrub species plantings shall be selected based on their suitability for the soils and moisture regime in those areas and may include: red oak, trembling aspen, eastern white cedar, red maple, basswood, bur oak, white pine, serviceberry species, and gray dogwood (*Cornus racemosa*).

v) The area north of the existing quarry (Pit 3) and west of the northern end of the deciduous swamp is to be rehabilitated to enhance connectivity and wildlife movement between the deciduous swamp and the significant woodland located north of 2nd Concession Road between Carl Road and Babion Road. These two significant woodlands are separated by 2nd Concession Road and distance of approximately 70 metres. The area recommended for rehabilitation consists of a berm vegetated with terrestrial grasses and forbs and a sparsely vegetated area north of Pit 3.

vi) All plantings (i.e., nodal plantings) included in the rehabilitation plan will be locally native, non-invasive species that create habitat in the short term and promote natural succession processes. The sourcing of plantings shall consider the regionally adapted genetics of the species. Plantings from local sources are likely to be well adapted to the local climate and growing conditions and may have a higher likelihood of successful establishment. Therefore, plantings will be procured from local sources to the extent possible.

vii) All rehabilitated side slopes are to be vegetated with a seed mixture capable of:

- Rapid germination and growth,
- Controlling erosion.
- Maintaining or enhancing soil fertility.

The seeding is to be established in a timely manner and if necessary, facilitated by the application of fertilizer, water and/or additional seeding.

8. Wignell Drain: Prior to undertaking operational activities that have the potential to impact fish habitat in the Wignell Drain, including drain realignment and stripping/excavation west of the drain within approximately 30 m, the appropriate agency/agencies shall be contacted, and the required authorizations will be obtained. An ecologist will be retained to determine the appropriate course of action at that time.

Tree Preservation Plan

1. All woodlands, forests and hedgerows located beyond the defined proposed extraction limits shall be preserved and protected in their entirety. Tree Protection Fencing shall be installed at minimum of the drip line plus one metre, per locations and extents noted on the Site Plans.

2. Tree Removal: Trees located within FOD7-2 are recommended for removal to permit the Phase 2 extraction work of the proposed quarry expansion. The presence of Emerald Ash Borer damage, high occurrence of Ash trees, pioneer species and possible restoration plantings, within the study area as well as the relatively young age of the trees present on site contribute to a low preservation priority for the FOD7-2 feature. All removals shall be in accordance with the following notes:

Construction Impact Mitigation

a) Potential Construction Impacts to Trees

Trees are living organisms that react to changes in their environment. Trees can be damaged during construction without showing signs of damage until some years later. Most of the impacts relate to the removal of roots that results in the slow death of the tree as a result of its inability to absorb sufficient water and nutrients. Contained within this section are descriptions of the potential impacts this project may have on the trees, and impact mitigation methods that are intended to aid in the mitigation of impact during construction.

Soil Compaction and Root Damage

The leading cause of construction damage to trees is compaction of the soil around the roots or within the Tree Protection Zone (TPZ). The TPZ is the area around the tree or group of trees in which no grading or construction activity may occur. Equipment entering into a TPZ compresses the air pockets around the roots inhibiting the tree from absorbing nutrients and water. This damage ultimately degrades the health of the tree. Accordingly, during the removal stage, equipment used within the preservation zones shall be restricted to ensure that the tree's roots are not disturbed, thereby assisting in maintaining their continued health. The TPZ is protected and delineated by the Tree Protection Fencing.

Mechanical Damage

Equipment can physically damage the trees through striking the trunk, limbs, and/or roots. Felled trees can also cause damage during the tree removal stage of construction. Some damage is unavoidable due to the proximity of adjacent trees; however, through the use of proper equipment and best management practices the damage can be minimized. The Contractor shall be held responsible for all avoidable damage to the trees during all stages of development. Note: trees shall always be felled away from adjacent trees to be retained.

Root Damage

The success of tree preservation is dependent not only on protecting the root zone from compaction and damage; it is also contingent upon the ability to ensure that the structural roots within the root plate are not disturbed. Impacts to this area may result in the structural failure of these trees. Excavating soil 1 metre outside a tree's drip line, or within a drip line can damage roots by tearing and splitting back to the stem. This damage can later lead to rot that can kill the tree. All work within the drip line of an existing tree shall be approved by an Arborist. When excavating the top 30-60 cm of soil adjacent to trees, care must be taken. Excavation shall cleanly sever the roots prior to stripping and removal of soil. Exposed roots with a diameter greater than 2.5 cm (1 inch) shall be pruned back to the soil face to prevent damage to the tree.

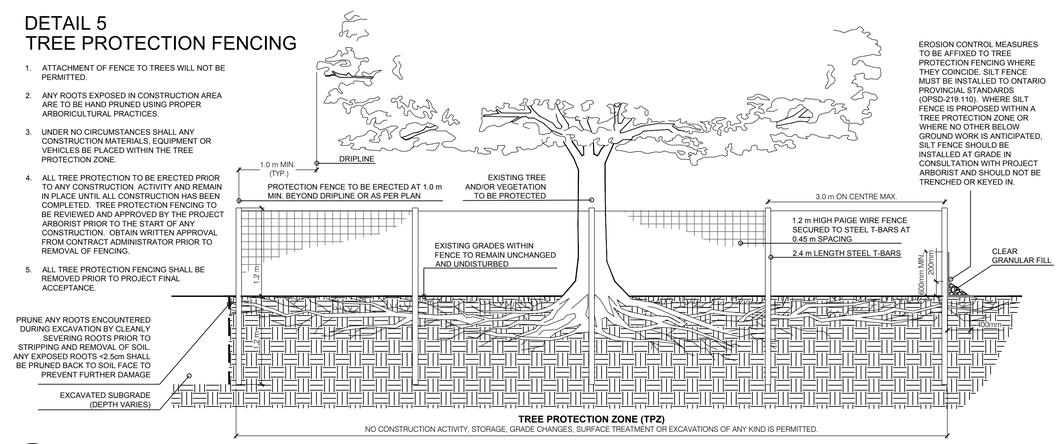
b) Protecting and Managing Trees During Construction

The following recommendations are presented to provide appropriate tree protection and management during the future development and construction of this project:

1. Tree Protection Fencing (TPF) shall be installed to protect all trees identified for preservation. Tree Protection shall conform to City of Port Colborne standards. Upon installation of the tree protection fencing, the Contractor shall contact the Project Arborist to review and approve the fencing and its location prior to commencement of any site work. A written certification of the installed TPF will be provided to the City. The protection fencing shall remain intact throughout the duration of the quarry extraction and rehabilitation works. The fencing shall be inspected monthly and repaired as required. The fencing shall be removed in its entirety at the completion of all rehabilitation works.

DETAIL 5
TREE PROTECTION FENCING

1. ATTACHMENT OF FENCE TO TREES WILL NOT BE PERMITTED.
2. ANY ROOTS EXPOSED IN CONSTRUCTION AREA ARE TO BE HAND PRUNED USING PROPER ARBORICULTURAL PRACTICES.
3. UNDER NO CIRCUMSTANCES SHALL ANY CONSTRUCTION MATERIALS, EQUIPMENT OR VEHICLES BE PLACED WITHIN THE TREE PROTECTION ZONE.
4. ALL TREE PROTECTION TO BE ERECTED PRIOR TO ANY CONSTRUCTION ACTIVITY AND REMAIN IN PLACE UNTIL ALL CONSTRUCTION HAS BEEN COMPLETED. TREE PROTECTION FENCING TO BE REVIEWED AND APPROVED BY THE PROJECT ARBORIST PRIOR TO THE START OF ANY CONSTRUCTION. OBTAIN WRITTEN APPROVAL FROM CONTRACT ADMINISTRATOR PRIOR TO REMOVAL OF FENCING.
5. ALL TREE PROTECTION FENCING SHALL BE REMOVED PRIOR TO PROJECT FINAL ACCEPTANCE.



1 / L-1 TREE PROTECTION FENCE
N.T.S.

PIT 3 EXTENSION

ADDITIONAL OPERATIONAL NOTES PLAN

SHEET 5 OF 9

2. Upon receiving the necessary project approvals and prior to the commencement of tree removals, all trees designated for preservation must be flagged in the field. All designated preservation areas must be left standing and undamaged during site works. Removals are to be completed outside of migratory bird nesting season, generally from April 1 to August 31. If removals occur within the restricted activity period, they shall be in accordance with the Migratory Birds Convention Act, 1994. Due diligence measures, including pre-clearing nest sweeps can be employed to reduce risk to nesting birds and to comply with Migratory Birds Regulations. These surveys will be completed by a qualified person such as a wildlife biologist or ornithologist.
The following is the process that shall be carried out if tree removals are requested during the restricted time frame indicated in the Migratory Birds Convention Act:

a. Contact a qualified individual (i.e., wildlife biologist or ornithologist), to determine if nesting birds are within the tree removal disturbance area.

ii. If the bird specialist has determined that there are nesting birds on site, there will be no tree removals/chipping conducted within the boundary set out by the specialist. Tree removals can resume within this once the migratory bird specialist has determined that the nest is no longer utilized.

iii. If the bird specialist determines there are no migratory birds nesting within the disturbance area, the contractor will have a predetermined clearance window to conduct removals (as determined by the specialist). At the end of the clearance window, if removals and chipping are not complete, the bird specialist will return to the site and proceed with another assessment/nest sweep. This process will continue until all removals and chipping is complete.

3. The TPZ is the area around a retained tree that is to be protected by tree protection fencing. The TPZ is not to be used for any type of storage (e.g. storage of debris, construction material, surplus soils, and construction equipment). No trenching or tunneling for underground services shall be located within the TPZ. Construction equipment shall not be allowed to idle or exhaust within the TPZ.

4. Trees shall not have any rigging cables or hardware of any sort attached or wrapped around them, nor shall any contaminants be dumped within the protective areas. Further, no contaminants shall be dumped or flushed where they may come into contact with the feeder roots of the trees. In the event that roots from retained trees are exposed, or if it is necessary to remove limbs or portions of trees after construction has commenced, the Project Arborist shall be informed and the proper actions conforming to City Policies and By-Laws shall be carried out.

5. Upon completion of the tree removals, refer to Operational Note 12. Any chipping, cutting or brush clean-up is to be completed outside the bird nesting season. If these activities are to occur within the restricted activity period, due diligence measures, including pre-clearing nest sweeps will be employed to reduce risk to nesting birds protected under the Migratory Birds Convention Act, 1994 and Migratory Birds Regulations. These surveys will be completed by a qualified biologist.

6. Excavation adjacent to trees to be preserved must be completed with due care and attention. Excavation shall cleanly sever the roots prior to stripping and removal of soil. Should roots be encountered during excavation all exposed roots with a diameter greater than 2.5 cm (1 inch) shall be pruned back to the soil face to prevent damage to the tree. Roots smaller than 2.5 cm (1 inch) shall be cleanly cut using a sharpened spade or bypass pruners at the limits of excavation.

Visual Impact Assessment, IBI Group dated December 2020

1. That Berm A: a 4.0 metre-high berm along the Second Concession frontage be built with a 4:1 slope on the external side and with vegetation plant between the berm and boundary fence as per Natural Environment Report Recommendation Note 7iv).

2. That Berm B: a 2.0 metre-high berm along the northern portion of the eastern property boundary be built with a 3:1 slope.

3. Berm C: a 2.0 metre-high berm along the northern portion of the 'eastern-tab' built with a 3:1 slope.

4. 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 and 2.5:1 on the internal side. Both coniferous and deciduous trees are to be planted between the berm and the Miller Road boundary fence.
Where the 4.0 metre gap is retained at the mid-frontage location in the berm for farm equipment / pit staff access, a temporary cross-over berm (minimum 2.0-metre-high berm and minimum 50.0 metres long) be constructed behind the gap.

5. Berm E: 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.

6. Berm E: a 2.0 metre-high berm along the southern portion of the 'eastern-tab' built with a 3:1 slope.

7. 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.

8. Berm G: a 4.0 metre-high along the Main Street frontage built with a 4:1 slope on the external side with deciduous and coniferous trees planted between the berm and boundary fence.

9. Berm H: a 3.0 metre-high berm along the western property boundary associated with 1326 Main Street.

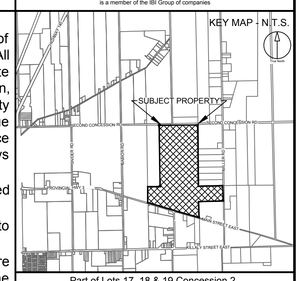
10. During the initial 8.0 m deep excavation lift, all stockpiles within 200.0 m of Miller Road and Highway 3 (Main Street), shall not exceed 10.0 m in height.

11. Both coniferous and deciduous trees are to be planted between the berm and the Highway 3 (Main Street) and Miller Road boundary fence.

12. Existing hedgerow vegetation is to be retained where possible.

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

APPLICANT
PORT COLBORNE QUARRIES INC.
222 MARTINDALE ROAD, P.O. BOX 1116
ST. CATHERINES, ON, L2R 7A3



Part of Lots 17, 18 & 19 Concession 2,
and R.P.59R-16702 Part of Road Allowance
between Lot 18 & 19 Concession 2,
in former Township of Humberstone,
the City of Port Colborne,
Region of Niagara

#	DATE	BY	DESCRIPTION
SITE PLAN AMENDMENTS			
3	2022.01.18	J.M.	NOTE AND DESIGN CHANGES AS PER JART COMMENTS
2	2021.11.15	E.T.	REVISED LICENSED LIMIT & JART COMMENTS
1	2021.02.09	E.T.	AS PER MNRF PRELIMINARY REVIEW COMMENTS
REVISIONS PRIOR TO APPROVAL			

SITE DATA

AREA TO BE LICENSED	± 80.34 ha
AREA TO BE EXTRACTED	± 71.12 ha
EX. DISTURBED AREA	Nil
TOTAL LAND PARCEL	± 106.29 ha

THESE SITE PLANS HAVE PREPARED UNDER THE AGGREGATE RESOURCES ACT FOR A CLASS A LICENSE, CATEGORY 2. THEY HAVE BEEN PREPARED BY THE UNDERSIGNED BY THE AUTHORITY OF MINISTERIAL APPROVAL AS SPECIFIED IN THE ARA SECTION 8 (4).

DATE: Jan.15, 2021

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PORT COLBORNE QUARRIES INC.

PIT 3 EXTENSION

SCALE: 1 : 2,500 (0 25 50 75 100m)

PROJECT NO: 115774

DRAWN BY:	CHECKED BY:
E.T.	D.R.S.
PROJECT MGR:	APPROVED BY:
D.R.S.	D.R.S.

SHEET TITLE
ADDITIONAL OPERATIONAL NOTES PLAN

SHEET NUMBER 5 of 9

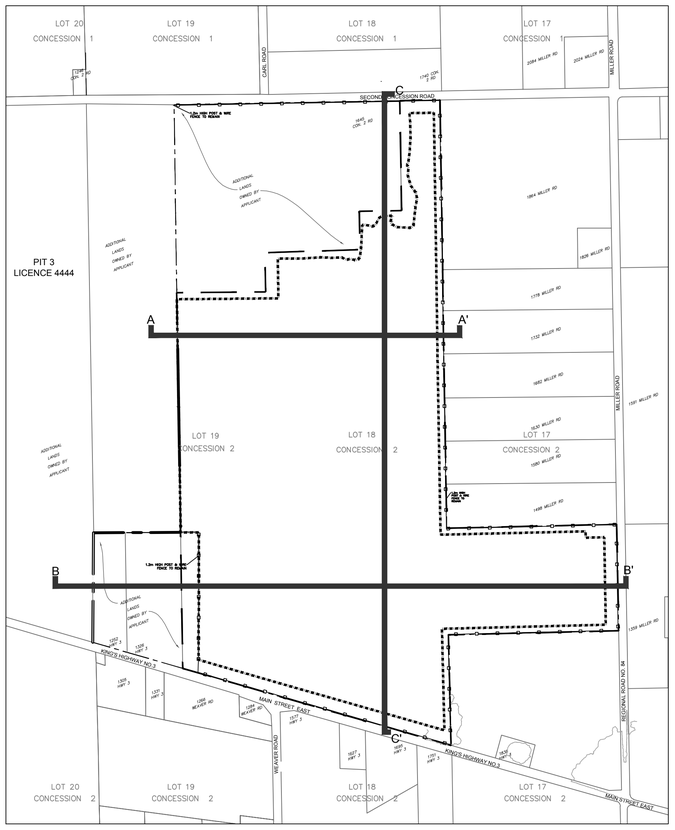
ISSUE

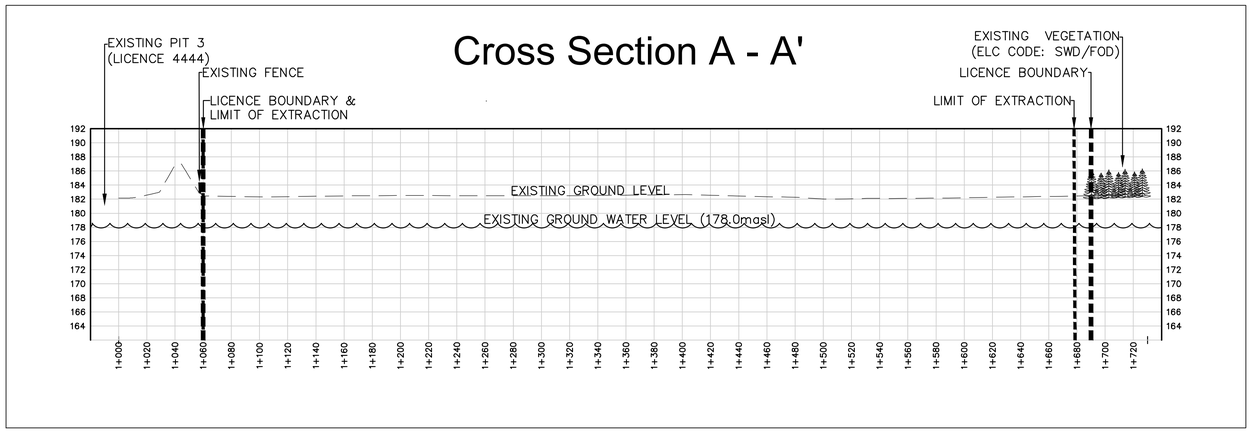
File Location: J:\115774_PortColborne\5.0 Drawings\Sip\ref\PIT-3-EXTN\SHEETS\115774-Title_Blk.dwg Last Saved: January 18, 2022, by joanne.mccallum Plotted: Tuesday, January 18, 2022 9:31:47 AM by Joanne McCallum
SCALE CHECK 100mm

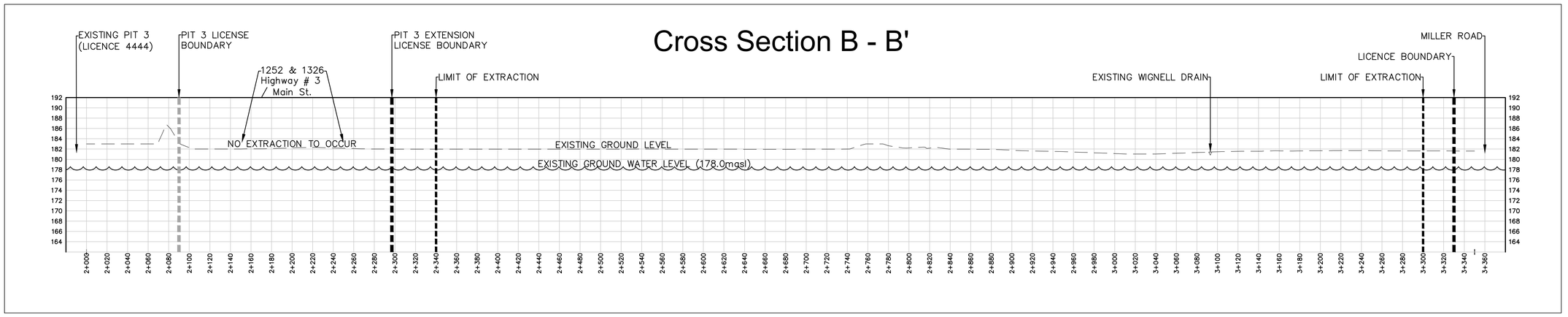
PIT 3 EXTENSION

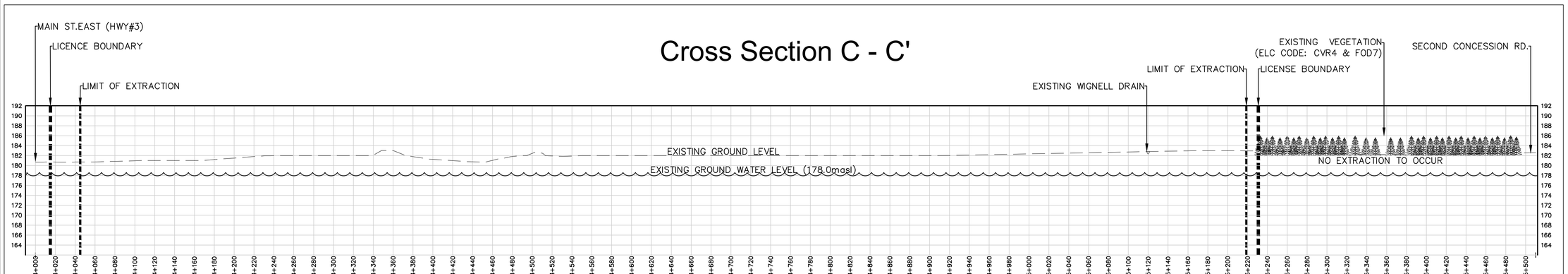
EXISTING CONDITIONS CROSS-SECTION PLAN

SHEET 7 OF 9







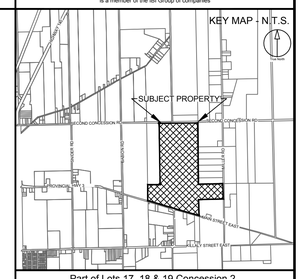


APPLICANT

PORT COLBORNE QUARRIES INC.

222 MARTINDALE ROAD, P.O. BOX 1116
ST. CATHERINES, ON, L2R 7A3

KEY MAP - N.T.S.



Part of Lots 17, 18 & 19 Concession 2, and R.P.59R-16702 Part of Road Allowance between Lot 18 & 19 Concession 2, in former Township of Humberstone, the City of Port Colborne, Region of Niagara

LEGEND

- LICENSED BOUNDARY
- LIMIT OF EXTRACTION
- EXISTING GROUND LEVEL
- EXISTING GROUND WATER LEVEL (178.0 m.a.s.l.)

VERTICAL SCALE 1 : 400 — 0 5 10 15 20m

HORIZONTAL SCALE 1 : 2,000 — 0 25 50 75 100m

#	DATE	BY	DESCRIPTION
			SITE PLAN AMENDMENTS
2	2021.11.15	E.T.	REVISED LICENSED LIMIT & JART COMMENTS
1	2021.02.09	E.T.	AS PER MNRF PRELIMINARY REVIEW COMMENTS
			REVISIONS PRIOR TO APPROVAL

SITE DATA

AREA TO BE LICENSED	± 80.34 ha
AREA TO BE EXTRACTED	± 71.12 ha
EX. DISTURBED AREA	Nil
TOTAL LAND PARCEL	± 106.29 ha

THESE SITE PLANS HAVE PREPARED UNDER THE AGGREGATE RESOURCES ACT FOR A CLASS A LICENSE, CATEGORY 2. THEY HAVE BEEN PREPARED BY THE UNDERSIGNED BY THE AUTHORITY OF MINSTERIAL APPROVAL AS SPECIFIED IN THE ARA SECTION 8 (4).

DATE: Jan.15, 2021

IBI GROUP
Suite 101 - 410 Albert Street
Waterloo ON N2L 3V3 Canada
tel 519 585 2255
ibigroup.com

PORT COLBORNE QUARRIES INC.

PIT 3 EXTENSION

SCALE:	VERTICAL:	1 : 400
	HORIZONTAL:	1 : 2,000
PROJECT NO:	115774	
DRAWN BY:	E.T.	
CHECKED BY:	D.R.S.	
PROJECT MGR:	D.R.S.	
APPROVED BY:	D.R.S.	

SHEET TITLE

EXISTING CONDITIONS CROSS-SECTIONS

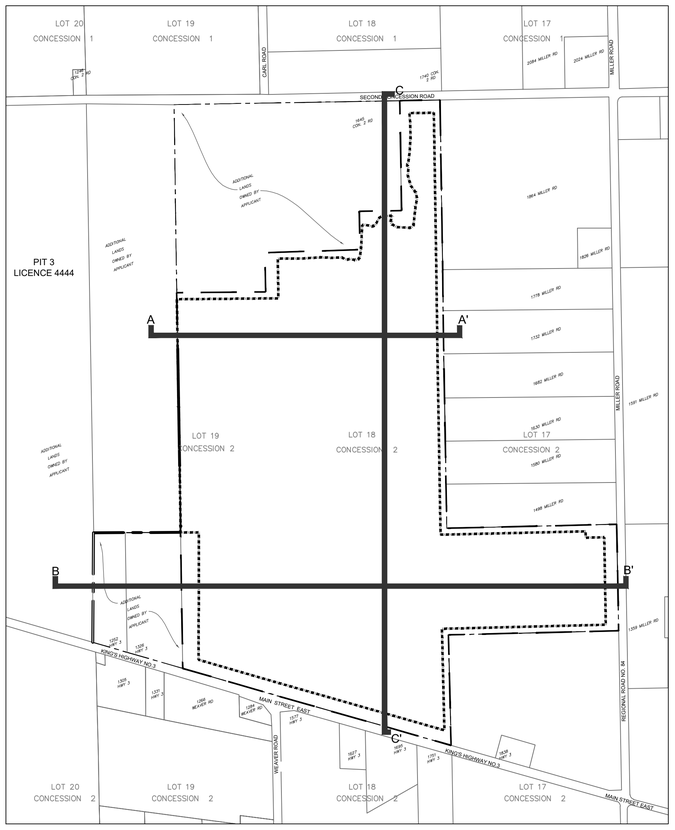
SHEET NUMBER **7 of 9**

ISSUE

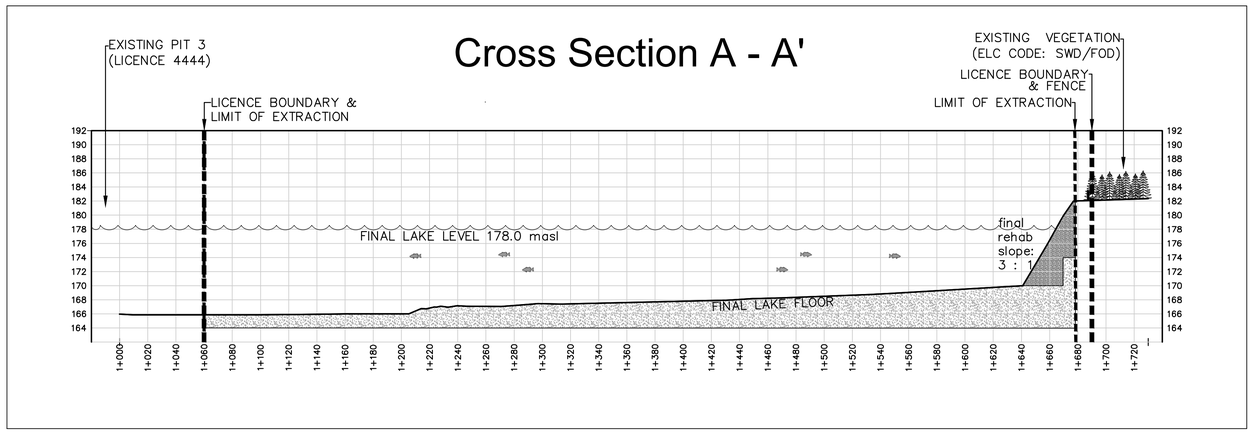
PIT 3 EXTENSION

REHABILITATION CROSS-SECTION PLAN

SHEET 8 OF 9



Cross Section A - A'



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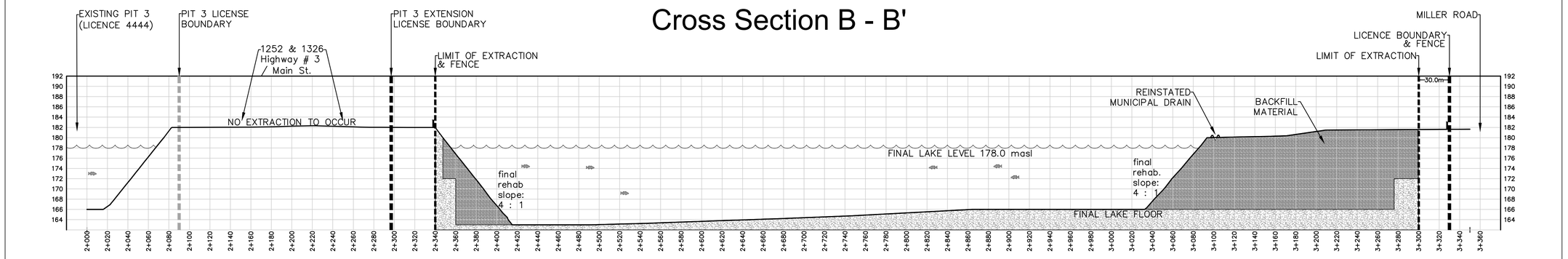
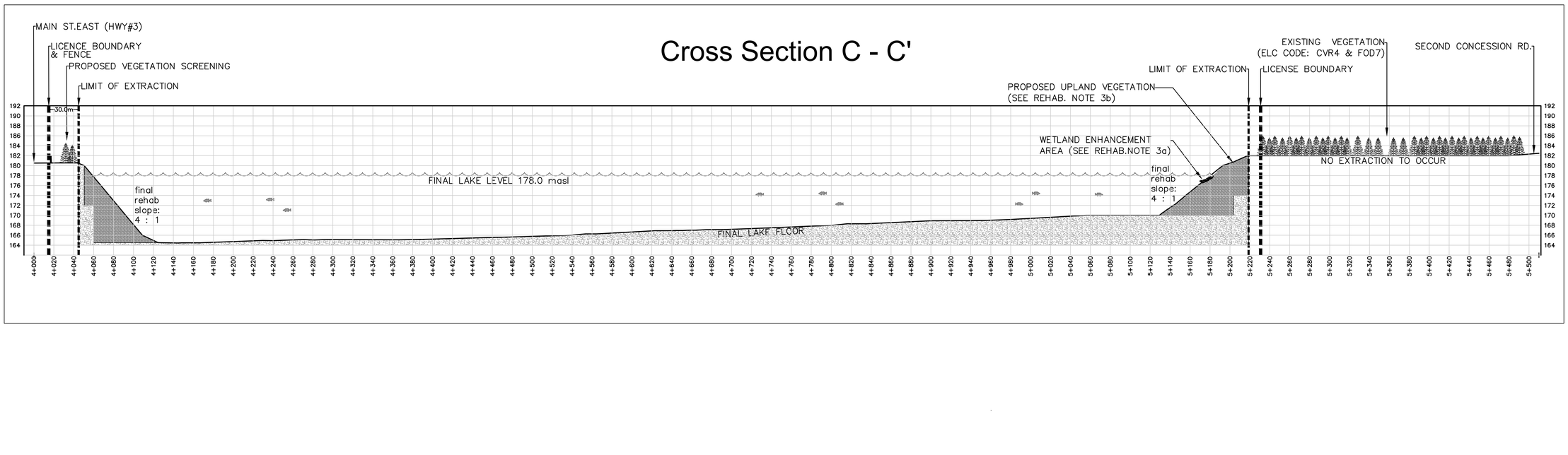


Cross Section C - C'

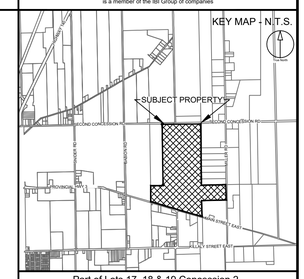


APPLICANT

PORT COLBORNE QUARRIES INC.

222 MARTINDALE ROAD, P.O. BOX 1116
ST. CATHERINES, ON, L2R 7A3

KEY MAP - N.T.S.



Part of Lots 17, 18 & 19 Concession 2, and R.P.59R-16702 Part of Road Allowance between Lot 18 & 19 Concession 2, in former Township of Humberstone, the City of Port Colborne, Region of Niagara

LEGEND

- LICENSED BOUNDARY
- LIMIT OF EXTRACTION
- GROUND LEVEL AFTER REHABILITATION (FINAL QUARRY FLOOR)
- FINAL LAKE WATER LEVEL (178.0msl)
- PROPOSED FENCE (POST & WIRE, 1.2m HIGH)
- EXISTING SOIL / BEDROCK
- BACKFILLED SLOPES (SEE PROGRESSIVE REHABILITATION NOTE 2, SHEET 9 of 9)

VERTICAL SCALE 1 : 400 — 0 5 10 15 20m

HORIZONTAL SCALE 1 : 2,000 — 0 25 50 75 100m

#	DATE	BY	DESCRIPTION
			SITE PLAN AMENDMENTS
2	2021.11.15	E.T.	REVISED LICENSED LIMIT & JART COMMENTS
1	2021.02.09	E.T.	AS PER MNRF PRELIMINARY REVIEW COMMENTS
			REVISIONS PRIOR TO APPROVAL

SITE DATA

AREA TO BE LICENSED	± 80.34 ha
AREA TO BE EXTRACTED	± 71.12 ha
EX. DISTURBED AREA	Nil
TOTAL LAND PARCEL	± 106.29 ha

THESE SITE PLANS HAVE PREPARED UNDER THE AGGREGATE RESOURCES ACT FOR A CLASS A LICENSE, CATEGORY 2. THEY HAVE BEEN PREPARED BY THE UNDERSIGNED BY THE AUTHORITY OF MINSTERIAL APPROVAL AS SPECIFIED IN THE ARA SECTION 8 (4).

DATE: Jan.15, 2021

IBI GROUP
Suite 101 - 410 Albert Street
Waterloo ON N2L 3V3 Canada
tel 519 585 2255
ibigroup.com

PORT COLBORNE QUARRIES INC.

PIT 3 EXTENSION

SCALE:	VERTICAL: 1 : 400 HORIZONTAL: 1 : 2,000
PROJECT NO:	115774
DRAWN BY:	E.T.
CHECKED BY:	D.R.S.
PROJECT MGR:	D.R.S.
APPROVED BY:	D.R.S.

SHEET TITLE

REHABILITATION CROSS-SECTIONS

SHEET NUMBER

8 of 9

ISSUE

7.4 Final Rehabilitation

The subject lands will become a 177 hectare passive lake connected with the Pit 3 lands. For details regarding the comprehensive overall rehabilitation of the lands, refer to Appendix M.

Refer to Figure 9 Progressive and Final Rehabilitation Plan.

7.5 Surrendering of Licence

Once the extraction and the progressive rehabilitation is completed (side slopes, vegetation planting and fish habitat enhancements), and the dewatering pumps removed, the quarry will begin to fill. At this stage, PCQ will contact MNRF staff to undertake a final inspection of the site and request the licence be surrendered.

Refer to Figure 9 Progressive and Final Rehabilitation Plan.

8 Supporting Studies

8.1 Noise (Acoustical) Impact Assessment (Appendix B)

A Noise (Acoustical) Impact Assessment has been completed and is attached hereto as Appendix B. The report was prepared by Golder Associates Inc. by J. Tomaselli and is dated November 2020 and updated December, 2021. The CV for J. Tomaselli is attached to the noise report.

The Acoustical Impact Study was prepared to satisfy numerous policy requirements, including:

- Provincial Policy Statement 2020
  Policy 2.5 Mineral Aggregate Resources and specifically 2.5.2.2
- Region of Niagara Official Plan (2014)
  Policy 6.C.5 Mineral Resources
- City of Port Colborne Official Plan (2017)
  Policy 10.2 Aggregate / Extractive Industrial Sites

In addition to these Policy requirements, the Provincial Standards for a Category 2 Licence under the Aggregate Resources Act (2.2.8) require the completion of this study where sensitive receivers exist within 500.0 metres.

Findings of the report include the conclusion that the northern frontages of the site, (Second Concession Road and Miller Road), reflect a MECP Class 3 area which limits daytime noise levels to 45 dBA and is generally characterized as being rural, being an environment dominated by natural sounds and little traffic. The balance of the site with frontage onto Highway 3 (Main St.) and Highway 140 has been determined to reflect a MECP Class 2 area which limits daytime noise levels to 50 dBA and is generally characterized as a combination of urban including a contribution of road traffic and existing industry, as well as rural, dominated by natural sounds and little traffic.

Based on the above, the report identified 30 neighbouring residences or ‘Points of Reception’ (POR) as being within the Class 3 area and 31 POR within the Class 2 area.

Because the proposed Pit 3 Extension will be a continuation of the existing Pit 3 extraction, all the same extraction, processing and haulage equipment will be consistent. Based on the assumption that the use of this equipment will be deemed ‘worst-case scenario’, and that any future equipment will be quieter, the report categorized and identified each piece of equipment and determined its maximum noise levels (refer to Table 1 or the Noise Impact Assessment).

PIT 3 EXTENSION

REHABILITATION PLAN

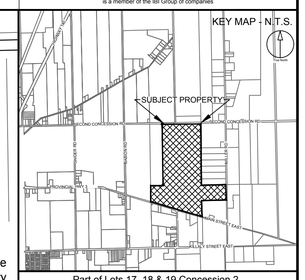
SHEET 9 OF 9

APPLICANT

PORT COLBORNE QUARRIES INC.

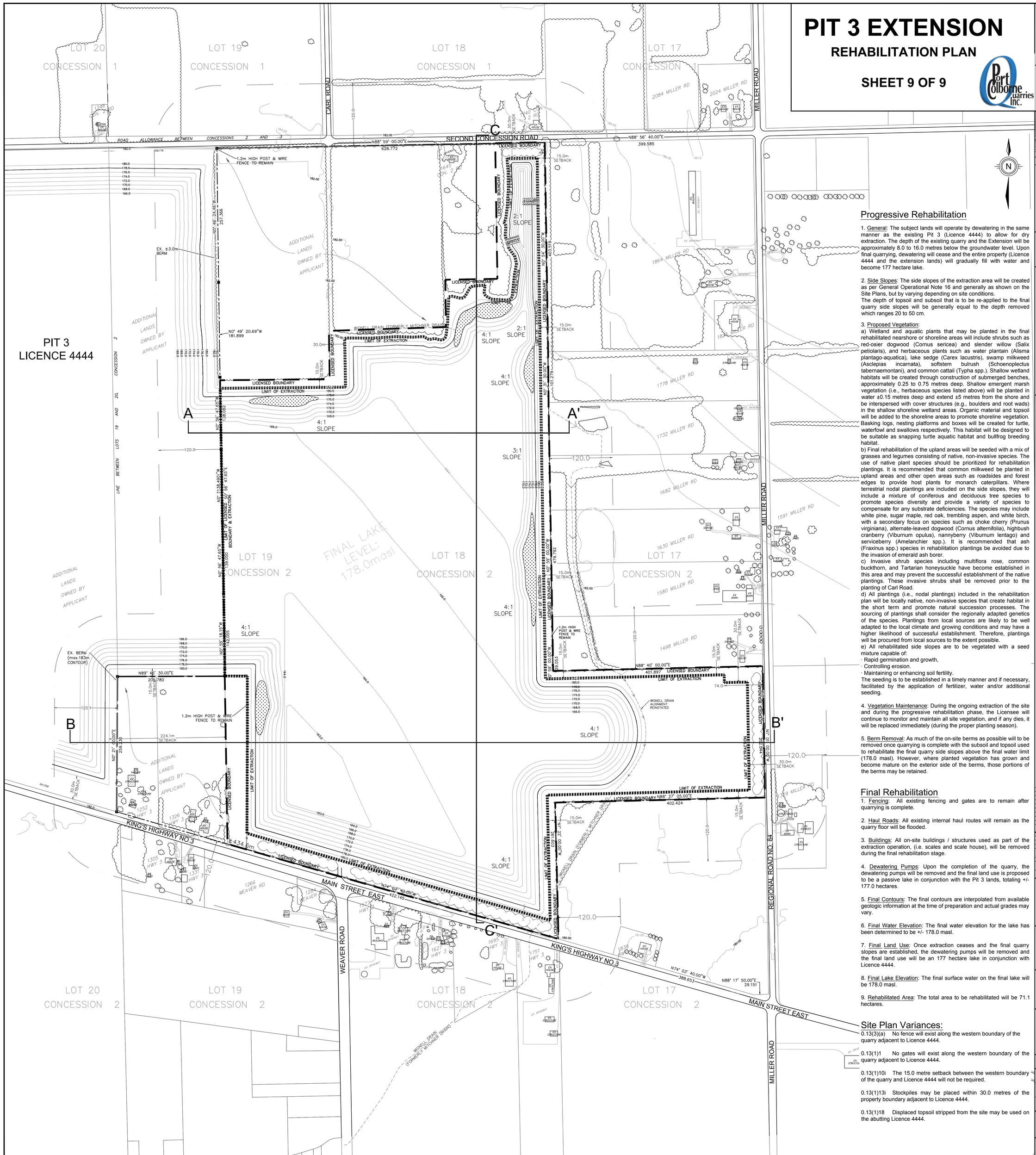
222 MARTINDALE ROAD, P.O. BOX 1116
ST. CATHERINES, ON, L2R 7A3

KEY MAP - N.T.S.



Part of Lots 17, 18 & 19 Concession 2,
and R.P.59R-16702 Part of Road Allowance
between Lot 18 & 19 Concession 2,
in former Township of Humberstone,
the City of Port Colborne,
Region of Niagara

PIT 3
LICENCE 4444



Progressive Rehabilitation

1. General: The subject lands will operate by dewatering in the same manner as the existing Pit 3 (Licence 4444) to allow for dry extraction. The depth of the existing quarry and the Extension will be approximately 8.0 to 16.0 metres below the groundwater level. Upon final quarrying, dewatering will cease and the entire property (Licence 4444 and the extension lands) will gradually fill with water and become 177 hectare lake.

2. Side Slopes: The side slopes of the extraction area will be created as per General Operational Note 16 and generally as shown on the Site Plans, but by varying depending on site conditions.
The depth of topsoil and subsoil that is to be re-applied to the final quarry side slopes will be generally equal to the depth removed which ranges 20 to 50 cm.

3. Proposed Vegetation:
a) Wetland and aquatic plants that may be planted in the final rehabilitated nearshore or shoreline areas will include shrubs such as red-osier dogwood (Cornus sericea) and slender willow (Salix petiolaris), and herbaceous plants such as water plantain (Alisma plantago-aquatica), lake sedge (Carex lacustris), swamp milkweed (Asclepias incarnata), softstem bulrush (Schoenoplectus tabernaemontani), and common cattail (Typha spp.). Shallow wetland habitats will be created through construction of submerged benches, approximately 0.25 to 0.75 metres deep. Shallow emergent marsh vegetation (i.e., herbaceous species listed above) will be planted in water ±0.15 metres deep and extend ±5 metres from the shore and be interspersed with cover structures (e.g., boulders and root wads) in the shallow shoreline wetland areas. Organic material and topsoil will be added to the shoreline areas to promote shoreline vegetation. Basking logs, nesting platforms and boxes will be created for turtle, waterfowl and swallows respectively. This habitat will be designed to be suitable as snapping turtle aquatic habitat and bullfrog breeding habitat.
b) Final rehabilitation of the upland areas will be seeded with a mix of grasses and legumes consisting of native, non-invasive species. The use of native plant species should be prioritized for rehabilitation plantings. It is recommended that common milkweed be planted in upland areas and other open areas such as roadsides and forest edges to provide host plants for monarch caterpillars. Where terrestrial nodal plantings are included on the side slopes, they will include a mixture of coniferous and deciduous tree species to promote species diversity and provide a variety of species to compensate for any substrate deficiencies. The species may include white pine, sugar maple, red oak, trembling aspen, and white birch, with a secondary focus on species such as choke cherry (Prunus virginiana), alternate-leaved dogwood (Cornus alternifolia), highbush cranberry (Viburnum opulus), nannyberry (Viburnum lentago) and serviceberry (Amelanchier spp.). It is recommended that ash (Fraxinus spp.) species in rehabilitation plantings be avoided due to the invasion of emerald ash borer.
c) Invasive shrub species including multiflora rose, common buckthorn, and Tartarian honeysuckle have become established in this area and may prevent the successful establishment of the native plantings. These invasive shrubs shall be removed prior to the planting of Carl Road.
d) All plantings (i.e., nodal plantings) included in the rehabilitation plan will be locally native, non-invasive species that create habitat in the short term and promote natural succession processes. The sourcing of plantings shall consider the regionally adapted genetics of the species. Plantings from local sources are likely to be well adapted to the local climate and growing conditions and may have a higher likelihood of successful establishment. Therefore, plantings will be procured from local sources to the extent possible.
e) All rehabilitated side slopes are to be vegetated with a seed mixture capable of:
· Rapid germination and growth,
· Controlling erosion.
· Maintaining or enhancing soil fertility.
The seeding is to be established in a timely manner and if necessary, facilitated by the application of fertilizer, water and/or additional seeding.

4. Vegetation Maintenance: During the ongoing extraction of the site and during the progressive rehabilitation phase, the Licensee will continue to monitor and maintain all site vegetation, and if any dies, it will be replaced immediately (during the proper planting season).

5. Berm Removal: As much of the on-site berms as possible will to be removed once quarrying is complete with the subsoil and topsoil used to rehabilitate the final quarry side slopes above the final water limit (178.0 masl). However, where planted vegetation has grown and become mature on the exterior side of the berms, those portions of the berms may be retained.

Final Rehabilitation

1. Fencing: All existing fencing and gates are to remain after quarrying is complete.

2. Haul Roads: All existing internal haul routes will remain as the quarry floor will be flooded.

3. Buildings: All on-site buildings / structures used as part of the extraction operation, (i.e. scales and scale house), will be removed during the final rehabilitation stage.

4. Dewatering Pumps: Upon the completion of the quarry, the dewatering pumps will be removed and the final land use is proposed to be a passive lake in conjunction with the Pit 3 lands, totaling +/- 177.0 hectares.

5. Final Contours: The final contours are interpolated from available geologic information at the time of preparation and actual grades may vary.

6. Final Water Elevation: The final water elevation for the lake has been determined to be +/- 178.0 masl.

7. Final Land Use: Once extraction ceases and the final quarry slopes are established, the dewatering pumps will be removed and the final land use will be an 177 hectare lake in conjunction with Licence 4444.

8. Final Lake Elevation: The final surface water on the final lake will be 178.0 masl.

9. Rehabilitated Area: The total area to be rehabilitated will be 71.1 hectares.

Site Plan Variances:

0.13(3)(a) No fence will exist along the western boundary of the quarry adjacent to Licence 4444.

0.13(1)1 No gates will exist along the western boundary of the quarry adjacent to Licence 4444.

0.13(1)10i The 15.0 metre setback between the western boundary of the quarry and Licence 4444 will not be required.

0.13(1)13i Stockpiles may be placed within 30.0 metres of the property boundary adjacent to Licence 4444.

0.13(1)18 Displaced topsoil stripped from the site may be used on the abutting Licence 4444.

LEGEND

- LOT & CONCESSION
- LICENSED BOUNDARY
- LIMIT OF EXTRACTION
- 1.2m POST & WIRE FENCE TO REMAIN
- MUNICIPAL DRAIN
- B' — B" LOCATION OF CROSS-SECTION (SEE SHEETS 7 OF 9 & 8 OF 9)
- FUTURE AQUATIC HABITAT
- VEGETATION SCREENING

#	DATE	BY	DESCRIPTION
			SITE PLAN AMENDMENTS
3	2022.01.18	J.M.	NOTE AND DESIGN CHANGES AS PER JART COMMENTS
2	2021.11.15	E.T.	REVISED LICENSED LIMIT & JART COMMENTS
1	2021.02.09	E.T.	AS PER MNRF PRELIMINARY REVIEW COMMENTS
			REVISIONS PRIOR TO APPROVAL

SITE DATA

AREA TO BE LICENSED	± 80.34 ha
AREA TO BE EXTRACTED	± 71.12 ha
EX. DISTURBED AREA	Nil
TOTAL LAND PARCEL	± 106.29 ha

THESE SITE PLANS HAVE PREPARED UNDER THE AGGREGATE RESOURCES ACT FOR A CLASS A LICENSE, CATEGORY 2. THEY HAVE BEEN PREPARED BY THE UNDERSIGNED BY THE AUTHORITY OF MINISTERIAL APPROVAL AS SPECIFIED IN THE ARA SECTION 8 (4).

DATE: Jan.15, 2021

IBI GROUP
Suite 101 - 410 Albert Street
Waterloo ON N2L 3V3 Canada
tel 519 585 2255
ibigroup.com

PORT COLBORNE QUARRIES INC.

PIT 3 EXTENSION

SCALE: 1 : 2,500 (0 25 50 75 100m)

PROJECT NO: 115774

DRAWN BY:	CHECKED BY:
E.T.	D.S.
PROJECT MGR:	APPROVED BY:
D.S.	

SHEET TITLE
REHABILITATION PLAN

SHEET NUMBER
9 of 9

ISSUE

SCALE CHECK 1 cm

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This information was then inputted into a noise computer model along with the proposed Pit 3 extraction design, quarry depths, existing barriers, haul routes.

The result was that the Noise Impact Assessment made the following recommendations;

1. The following minimum perimeter berms (or acoustically equivalent measures/barrier) will be implemented prior to extraction:
   - A 4 metre high (above existing grade) berm along the south property line.
   - A minimum 2 metre high (above existing grade) berm along the east and north property lines of the extension area.
2. The location of the berms is shown on the Operational Plan. In addition to 1 above, specific berm requirements, including additional required berm heights, will be determined through both noise and blast monitoring as the areas of extraction move towards the Points of Reception (PORs) as shown on the Operational Plan within the 'Increased Blast Monitoring Zone'.
3. Areas requiring additional and/or specific noise controls and/or quieter types of equipment are shown on the Operational Plan as 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 metres above major noise source associated with the drill.
2	Drill – local barrier extending 3.0 metres above major noise source associated with the drill.
3	Drill – attenuated equipment (i.e., reduced noise emissions or replace with quieter equipment)

4. Extraction and processing operations will occur only during the daytime period (7:00 am – 7:00 pm).
5. The general extraction progression to be followed is shown on the Operational Plan.
6. Setback distances between the drilling rig / blasting and receptors will be determined/confirmed through the blast monitoring program.
7. All existing on-site / external perimeter berms shall remain in place for the Port Colborne Quarries Inc.: Pit 1, Pit 2 and Pit 3 lands.
8. Extraction equipment will not exceed the following Overall Sound Power Levels Equipment list.

SOURCE DESCRIPTION	OVERALL SOUND POWER LEVELS (DBA)
Screen 115E - Upper deck west	127
Screen 115E – Lower deck west	127
Screen 115E – Upper deck east	123
Screen 115E – Lower deck east	123
Impact Crusher 177 - west	104
Impact Crusher 187 - east	104
Jaw Crusher Norberg	110
Impact Crusher 154	104
Wash plant 155E – west screen top	111
Wash plant 155E – west screen walls	107
Wash plant 155E – east screen top	111
Wash plant 155E – east side walls	107

SOURCE DESCRIPTION	OVERALL SOUND POWER LEVELS (DBA)
Drill	121
Loader Extraction	107
Haul Truck empty	112
Haul Truck full	116
Highway truck	102

9. On-site haul trucks will not exceed 35 km/h.
10. Equipment will be maintained in good condition.
11. On-site roadways will be maintained to limit noise resulting from trucks over ruts and pot-holes.

Based on the above, the Noise Impact Assessment was able to model and predict noise levels and recommended appropriate barrier (berm) heights based on the extraction operation. The drill-rig used for blasting and the actual blasting are additional elements that have been identified and acknowledged will require augmented acoustical attenuation especially as the extraction operation moves closer to the 'POR's. Based on this, the augmented mitigation will be in the form of a temporary / additional 'local barrier' to be placed above the proposed berm height. These temporary measures may include as an example, shipping containers that can be easily positioned and relocated. At the time when the Pit 3 Extension operation proceeds to these identified areas (Zones 1, 2, 3), PCQ may have other options obtainable to them, and / or quieter drill-rig and blasting options my be available.

In addition, the Blasting Impact Assessment identified that all blasting within 300.0 metres will necessitate additional monitoring. As such, it will be necessary for monitoring of the blasting component be dovetailed with the monitoring of the noise within Zones 1, 2 and 3.

Subject to the implementation of the recommendations from the Noise Impact Assessment, it is predicted that MECP noise guidelines within the identified Class 2 and Class 3 areas will be achieved.

The recommendations are noted in Appendix U (Site Plan Notes).

8.2 Agricultural Impact Assessment (Appendix C)

An Agricultural Impact Assessment (AIA) has been completed and is attached hereto as Appendix C. The report was prepared by Colville Consulting Inc. by S. Colville and is dated September 22, 2020, and updated October 2021. The CV for S. Colville is attached to the AIA report.

The AIA was prepared to satisfy numerous policy requirements, including:

- Provincial Policy Statement 2020
  Policy 2.3 - Agriculture
  Policy 2.5 - Mineral Aggregate Resources and specifically 2.5.3 and 2.5.4.1
- Growth Plan for the Greater Golden Horseshoe 2014
  Policy 4.2.5 - Agricultural System
- Region of Niagara Official Plan
  Policy 5.B.7 - Agriculture
  Policy 6.C.5 - Mineral Resources and specifically
- City of Port Colborne Official Plan (2017)
  Policy 3.5 – Agriculture

In addition to these Policy requirements, the Provincial Standards for a Category 2 Licence under the Aggregate Resources Act (2.1.2) requires the agricultural classification of the proposed site, using the Canada Land Inventory classes.

The report confirmed that approximately 76% of the site contains CLI 2 or 3 soils and the balance of the site was determined to be disturbed as it coincides with the New Humberstone Speedway.

The report concluded that the PCQI's proposal will have some potential to negatively impact agricultural resources within the Subject Lands, and on-farm operations within the Study Area, but through the implementation of recommended mitigation measures, the majority of the potential impacts can be avoided or significantly minimized.

Of note however, of the 107.35 ha comprising the total site, approximately 55 ha of CLI Class 2 and 3 lands will eventually be removed from the agricultural land base as below water table extraction makes rehabilitation not feasible. To minimize the impact on the agricultural land base, the following are some of the recommendations;

- Excess topsoil not required for berm construction or post-extractive rehabilitation could be used to accommodate and 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.
- Appropriate buffering abutting agricultural lands shall employ such things as;
    a) Vegetated berms, which can offer both visual and physical buffers,
    b) Dust suppression techniques and noise management according to appropriate regulations.
- Perimeter fencing shall be established to minimize the potential for trespass and vandalism.
- If agricultural vehicles need to utilize the interior quarry roads to access agricultural lands within the licenced area, a safety protocol will be developed to ensure the safety of all farm traffic through the licenced area.
- 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).
- The licensee shall ensure that quarry signage on Miller Road 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 utilize existing haul routes and highways designed for transport of goods and services of all types.

As a result of ongoing dialog with MTO, a proposed Highway 3 entrance/ exit versus one on Miller Road has been supported which will provide the opportunity to avoid conflicts between farm related traffic using Miller Road and aggregate haul trucks.
For further details, refer to Appendix C: AIA.

8.3 Air Quality (Dust) Impact Assessment (Appendix Di)

Best Management Practices Plan for the Control of Fugitive Dust (BMPP) (Appendix Dii)

An Air Quality Impact Assessment has been completed and is attached hereto as Appendix Di. The report was prepared by Golder Associates Inc. by E. Lau and is dated December 2020, and updated December, 2021. CV for E. Lau is attached to the report. In addition, Golder Associates also prepared a Best Management Practices Plan for the Control of Fugitive Dust (BMPP) and it is attached hereto as Appendix Dii).

The Air Quality Impact Study was prepared to satisfy numerous policy requirements, including:

- Provincial Policy Statement 202
  Policy 2.5 Mineral Aggregate Resources and specifically 2.5.2.2
- Region of Niagara Official Plan (2014)
  Policy 6.C.5 Mineral Resources
- City of Port Colborne Official Plan (2017)
  Policy 10.2 Aggregate / Extractive Industrial Sites

The Air Quality Impact Assessment was completed to achieve the following:

- Characterize the existing air quality in the surrounding area,
- Estimate the emissions from the current and future quarry operations
- Predict the impact of the current and proposed quarry extension on local air quality through dispersion modelling,
- Recommend best management practices to help mitigate the potential for fugitive dust generation.

The air quality indicators for relevant air quality criteria include:

a) Particulate matter: suspended particulate matter (SPM) nominally >10um (PM10) and particles > 2.5um (PM25).
b) Crystalline silica: as a fraction of PM10,
c) Combustion gases: nitrogen dioxide (NO_2) sulphur dioxide (SO_2) and carbon monoxide (CO).

The criteria and federal objectives for air quality are the National Ambient Air Quality Objectives (NAAQOs) and the Canadian Ambient Air Quality Standards (CAAQSs).

Existing emission sources included, extraction phasing, crushing plant, wash plant, stockpiles, vehicles on paved and unpaved roads, vehicle exhaust emissions, non-vehicle exhaust emissions, material handling, drilling and blasting. The report also identified a total of 76 sensitive receivers surrounding the entire site, including Pit 1 where the main processing will continue during the initial extraction operation.

As a result of the modelling scenario's, it was concluded that maximum cumulative predicted concentrations are above some of the assessment criteria, but that the concentrations are significantly lower at the sensitive receptors. In order to reduce the maximum cumulative predicted concentrations, conservative aspects of the model have the potential for further refinement regarding:

- Blasting,
- Haul truck traffic,
- Material handling and
- Use of water deposition.

Furthermore, Golder has prepared a Best Management Practices Plan for the Control of Fugitive Dust (BMPP). The BMPP addresses issues related to:

- Paved roadways
- Unpaved roadways
- Material Handling and stockpiles
- Material Processing
- Drilling
- Blasting

Subject to the implementation of the recommendations from the Air Quality Impact Assessment and the implementation of the BMPP, it is predicted that there is a very low likelihood that the i) worst-case meteorology, ii) maximum extraction operations, and iii) the conditions that result in

90% percentile of the existing air quality compounds would occur simultaneously since the maximum predicted cumulative concentrations modelled, are very conservative.

The recommendations are noted in both Appendix Di) and Dii) F and identified on Appendix U (Site Plan Notes).

8.4 Archaeological Resource Assessment (Appendix Ei and Eii)

Archaeological Reports were completed and include the following:

- Archaeological Assessment Stage 1 and 2 (Background Study and Property Assessment) prepared by Golder and dated July 21, 2020.
- Archaeological Assessment Stage 1 and 2 Supplementary Documentation.

These reports are attached hereto as Appendix E i) and E ii) respectfully and were prepared by Golder Associates Inc. (M. Teal) and are dated July 21, 2020. CV for M. Teal is attached to these reports.

The Archaeological Stage 1 and Stage 2 reports were prepared to satisfy numerous policy requirements, including:

- Provincial Policy Statement 2020
  Policy 2.6 - Cultural Heritage
- City of Port Colborne Official Plan (2017)
  Policy 7.3 - Archaeological Resources

In addition to these Policy requirements, the Provincial Standards for a Category 2 Licence under the Aggregate Resources Act (2.2.5, 2.2.6) requires the completion of the said studies.

Stage 1 and 2 assessments were carried out across the entire subject lands and resulted in the identification of numerous archaeological sites throughout the site of varying sizes and complexity. Of the 38 sites identified, many are represented by a single archaeological find spot (i.e., Location 7, 27, 29), while others contain +100 find spots (i.e., Location 25). The majority of the Locations identified were deemed to have been cleared with no recommendation for further investigations. However, several sites, as noted below, have been recommended for Stage 3 assessment. At this time, many of the Stage 3 assessments have not been completed so each of these sites have included a 70.0 metre no-go buffer zone within which no disturbance shall occur until such time as the Stage 3 assessments is conducted in accordance with the Ministry of Heritage, Sport, Tourism and Culture Industries' (MHSTCI) *Standards and Guidelines for Consultant Archaeologists* to define the extent of each site, gather a representative sample of artifacts, and aid in determining the need for Stage 4 mitigation of impacts.

In specific circumstances and through the completion of a cost-benefit analysis, several of the identified sites have been determined by the applicant to be too large and/or complex to complete the necessary Stage 3 site work and those sites have been excluded from the Limit of Extraction.

LOCATION	MINISTRY IDENTIFICATION NUMBER	STATUS
1	AfGt-296	**Stage 3 Required**
2		Stage 2 completed, no further site work recommended
3		Stage 2 completed, no further site work recommended
4		Stage 2 completed, no further site work recommended
5		Stage 2 completed, no further site work recommended
6		Stage 2 completed, no further site work recommended

LOCATION	MINISTRY IDENTIFICATION NUMBER	STATUS
7		Stage 2 completed, no further site work recommended
8		Stage 2 completed, no further site work recommended
9		Stage 2 completed, no further site work recommended
10		Stage 2 completed, no further site work recommended
11		Stage 2 completed, no further site work recommended
12		Stage 2 completed, no further site work recommended
13		Stage 2 completed, no further site work recommended
14		Stage 2 completed, no further site work recommended
15		Stage 2 completed, no further site work recommended
16		Stage 2 completed, no further site work recommended
17	AfGt-305	**Stage 3 Required**
18		Stage 2 completed, no further site work recommended
19		Stage 2 completed, no further site work recommended
20		Stage 2 completed, no further site work recommended
21		Stage 2 completed, no further site work recommended
22		Stage 2 completed, no further site work recommended
23		Stage 2 completed, no further site work recommended
24		Stage 2 completed, no further site work recommended
25	AfGt-307	**Excluded from the Limit of Extraction**
26		Stage 2 completed, no further site work recommended
27		Stage 2 completed, no further site work recommended
28		Stage 2 completed, no further site work recommended
29		Stage 2 completed, no further site work recommended
30	AfGt-308	**Stage 3 Required**
31	AfGt-309	**Stage 3 Required**
32	AfGt-312	**Stage 3 Required**
33	AfGt-313	**Stage 3 Required**
34		Stage 2 completed, no further site work recommended
35	AfGt-314	**Stage 3 Required**
36	AfGt-315	**Stage 3 Required**
37		**Excluded from the Limit of Extraction**
38	AfGt-316	**Excluded from the Limit of Extraction**

The First Nations which have been actively involved in the application and provided field monitors for Stage 3 on-site field work that was initiated and include the following:

a) Mississaugas of the Credit First Nation

Archaeological Operations Supervisor: Megan DeVries
Department of Consultation and Accommodation (DOCA)

Monitors/Field Liaison Representatives (Stage 3)
Joy LaForme
Mariah Sault
Joe Guthro
Jodie Lovegrove
Steve Sault

b) Six Nations of the Grand First Nation

Archaeology Coordinator: Tanya Hill
Six Nations Lands & Resources
Lands and Resources Director: Lonny Bomberry

Monitors/Field Liaison Representatives (Stage 3)
Wayne Johnson
George Atkins
Marcus Doxtater
John Miller

c) Haudenosaunee Confederacy Chiefs Council (HCCC)/ Haudenosaunee Development Institute (HDI)

Monitoring Program Coordinator: Todd Williams and Wayne Hill

Monitors/Field Liaison Representatives (Stage 3)
Guy Williams
Kevin Isaacs
Sharann Martin

At this time, the Ministry of Heritage, Sport, Tourism and Culture Industries (MHSTCI) has been circulated with the Stage 1 and 2 reports for their review.

8.5 Blasting (Vibration) Study (Appendix F)

A Blasting (Vibration) Impact Study has been completed and is attached hereto as Appendix F. The report was prepared by Golder Associates Inc. by D. Corkery J. and is dated July 2020, and updated October, 2021. CV for D. Corkery is attached to this report.

The Blasting Impact Study was prepared to satisfy numerous policy requirements, including:

- Provincial Policy Statement 2020
  Policy 2.5 Mineral Aggregate Resources and specifically 2.5.2.2
- Region of Niagara Official Plan (2014)
  Policy 6.C.5 Mineral Resources
- City of Port Colborne Official Plan (2017)
  Policy 10.2 Aggregate / Extractive Industrial Sites

In addition to these Policy requirements, the Provincial Standards for a Category 2 Licence under the Aggregate Resources Act (2.2.98) require the completion of this study where sensitive receivers exist within 500.0 metres.

Findings of the report include the identification of 63 receptor residences surrounding the site, principally located east and south of the site.

The report modeling used typical blast design information as documented in Table 1 of the Blast Impact Assessment. This blast design is based on the existing blast practices used by PCQ within their abutting Pit 3 quarry.

The Blasting Impact Assessment concluded that based on the current design of the Pit 3 Extension Site Plans, that there would be no impact to surrounding sensitive receivers subject to the implementation of numerous recommendations. The blasting is undertaken by a specialized third-party licensed contractor and based on current practices, the blasting is expected to occur two times per week in each cell at peak production periods with each blast duration being > 1 second.

The recommendations include:

1. 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.
2. 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.
3. 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.
4. Prohibit blasting on Saturdays, Sundays and Statutory holidays.
5. 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.
6. Detailed blast records shall be maintained and shall include the following:
    a) Location, date and time of the blast;
    b) Dimensioned sketch including photographs, if necessary, of the location of the blasting operation, and nearest point of reception;
    c) Physical and topographical description of the ground between the source and the receptor location;
    d) Type of material being blasted;
    e) Sub-soil conditions, if known;
    f) Prevailing meteorological conditions including wind speed in m/s, wind direction, air temperature in ^{O}C, relative humidity, degree of cloud cover and ground moisture content;
    g) Number of drill holes;
    h) Pattern and pitch of drill holes;
    i) Size of holds;
    j) Depth of drilling;
    k) Depth of collar (or stemming);
    l) Depth of toe-load;
    m) Weight of charge per delay;
    n) Number and times of delays;

o) The results and calculated value of Peak Pressure Level in dBL and Peak Vibration in mm/s;
p) Applicable limits; and
q) The excess, if any over the prescribed limit.

Of note, and as highlighted in Recommendation 5, within approximately 300.0 metres of residences, the Licensee shall be required to undertake a regular review of their blasting monitoring results with an expectation that within this threshold, modifications to the blasting program will become necessary in order to remain compliant with current MECP guidelines. Modifications to the blasting program are common and anticipated. Furthermore, within this 300.0 metre threshold, the Noise Study has identified specific Noise Zones (1, 2, 3) where the noise consultant will require input from the blast monitoring program.

The recommendations are noted in both Appendix F (Blasting Report) and Appendix U (Site Plan Notes) attached hereto.

8.6 Cultural Heritage Screening Report (Appendix G)

A Cultural Heritage Screening Report has been completed and is attached hereto as Appendix G. The report was prepared by Golder Associates Inc. by H. Cary and is dated July 17, 2020. CV for H. Cary is attached to this report.

The Cultural Heritage Screening Report was prepared to satisfy numerous policy requirements, including:

- Provincial Policy Statement 2020
  Policy 2.6 - Cultural Heritage
- City of Port Colborne Official Plan (2017)
  Policy 7.3 - Archaeological Resources

The report concluded that there are no cultural heritage sites associated with the subject site.

8.7 Financial Impact Assessment / Economic Benefits (Appendix H)

A Financial Impact Assessment/Economic Benefits Report was completed and is attached hereto as Appendix H. The report was prepared by IBI Group, and is June 8, 2020, and updated October, 2021. CV for A. Jacob is attached to this report.

The Financial Impact Assessment / Economic Benefits Report was prepared to satisfy the following policy requirements;

- Region of Niagara Official Plan
  Policy 14.D.5 viii - Implementation

Findings of the report concluded that:

a) Land Value Assessment Analysis: The proposed quarry use is anticipated to increase the tax revenue generated from the Pit 3 Extension lands when compared to the existing uses. Over the lifespan of the quarry, it is estimated that the quarry could generate a total of +/- $490,000 for the Region and $745,000 for the City in property tax revenues.

b) Economic Benefits: The Pit 3 Extension is anticipated to maintain the same number of jobs (20) currently working at the existing active PCQ quarries.

c) Capital Impact: The existing and proposed quarry uses are not anticipated to have any impact on the Region's or City's capital programs and if any construction or upgrades are required through further study, PCQ is committed to enter into an agreement with the Region and/or City to cover the necessary costs.

d) Financial Benefits: Based on the full excavation potential of the quarry, the Pit 3 Extension is estimated to generate between $1.2 million and $1.4 million for the Region and $5.0 million and $5.6 million for the City in Aggregate Resources Act levy contributions.

The report provided no recommendations.

8.8 Hydrology (Water Resources) (Appendix I and J)

Hydrology assessment have been completed and include the following:

- Hydrological Assessment (Surface Water) prepared by Golder Associates Inc. (K. Mackenzie) dated August 2020, and updated December, 2021 attached hereto as Appendix I. The CV for K. Mackenzie is attached to the report.
- Hydrogeology (Groundwater) prepared by Golder Associates Inc. (S. McFarland) dated July 2020, and updated October, 2021 and attached hereto as Appendix J. The CV for S. McFarland is attached to the report.

These assessments were prepared to satisfy numerous policy requirements, including:

- Provincial Policy Statement 2020
  Policy 2.1 Natural Heritage
  Policy 2.2 Water
  Policy 2.5 Mineral Aggregate Resources
  Policy 3.0 Protection Public Health and Safety
  Policy 3.2 Human-Made Hazards
- Growth Plan for the Greater Golden Horseshoe 2014
  Policy 3.2.7 Stormwater Management
  Policy 4.2.2 Natural Heritage System
  Policy 4.2.3 Key Hydrologic Features, Key Hydrologic Areas and Key Natural Heritage Features
  Policy 4.2.4 Lands Adjacent to Key Hydrologic Features and Key Natural Heritage Features
- Region of Niagara Official Plan (2014)
  7.A.2.6 Stormwater Management
  7.B.1.6 Natural Environment
- City of Port Colborne Official Plan (2017)

  Policy 4.1 Natural Heritage Features
  Policy 4.2 Environmental Protection Areas
  Policy 4.3 Environmental Conservation Areas
  Policy 8.2 Stormwater Management
- Niagara Peninsula Conservation Authority (NPCA) Policy Document: Policies For The Administration Of Ontario Regulation 155/06 And The Planning Act (2018)
  Policy 7.1.1 Hazardous Sites and Hazardous Lands
  Policy 8.0 Wetlands
  Policy 8.1.5 Hydrological Study
  Policy 8.2.2 Development and Interference within a Wetland
  Policy 8.2.6 Stormwater
  Policy 9.1.1 Watercourses
  Policy 9.1.2 Need for an EIS/Hydrological Study
  Policy 11.1 Municipal Drains
  Policy 12.4.8.2 Supporting Studies: Hydrogeological Study
  Policy 12.4.9 Erosion and Sedimentation Control Plans

In addition to these Policy requirements, the Provincial Standards for a Category 2 Licence under the Aggregate Resources Act (2.2.1 and 2.2.2) require the completion of these studies.

Findings of the reports are as follows.

8.8.1 Hydrological Assessment (Appendix I)

The assessment identified several surface water features within the subject lands including;

- an unnamed tributary that connects with the east branch of the Wignell drain (formerly Mitchner Drain) in the northern and eastern portion of the site,
- a pond in the northeast corner and
- three ponds adjacent to the Humberstone Speedway in the southeast corner of the site.

In addition, north of the Limit of Extraction there is a wooded wetland feature (deciduous swamp) which maintains standing water or wet conditions for portions of the year. This feature contributes drainage to the upstream end of the East Wignell Drain (formerly Mitchner Drain). It is anticipated that the wetland receives drainage from north of the Second Concession Road, but not from the agricultural lands to the south (proposed extraction area).

It should be noted that the Wignell Drain is a municipal drain under the Drainage Act and that the City of Port Colborne has initiated a process to realign its eastern branch and it is anticipated that site work will occur prior to the proposed quarry extension.

Because the abutting existing Pit 3 extraction operation is operated through dewatering, PCQ operates under an existing Permit to Take Water (PTTW) authorized by the Ministry of Environment, Conservation and Parks, (MECP) and that Permit requires ongoing annual groundwater monitoring. Similarly, since the pumped water must be discharged, PCQ also operates under an Environmental Compliance Approval, also authorized by MECP and it also necessitates monitoring, including quarterly discharge samples analyzed for hydrogen sulphide, total suspended solids and total oil and grease as well as field measurements of pH, temperature, conductivity and dissolved oxygen. In order to best obtain an increased level of site knowledge, additional surface monitoring stations were installed throughout the branches of the Wignell Drain.

As a result of the completion of detailed water balance calculations, the report makes the following conclusions;

- Compared to existing conditions, average annual surplus over the site footprint area is expected to increase under operational conditions by approx. 22% and decrease under rehabilitation conditions by approx. 6%.
- Compared to existing conditions, average annual infiltration is expected to decrease over the site footprint under operational and rehabilitation conditions.
- Compared to existing conditions, average annual off-site runoff is expected to increase under operational and rehabilitation conditions.

In summary, the report concludes that no adverse hydrological impacts will be associated with the application subject to the following recommendation;

1. All monitoring requirements with respect to the quarry discharges and the receiving system will be regulated by the Industrial Sewage Works Environment Compliance Approval, (MECP) to be amended prior to the dewatering of Pit 3 Extension.
2. The increased runoff under operational and rehabilitated conditions will be directed to the east and west branches of the Wignell drain, increasing the annual flows within these water features.

8.8.2 Hydrogeology Assessment (Appendix J)

The Hydrogeological Assessment confirmed that:

a) The site bedrock is characterized by the Onondaga Formation which overlies the Bois Blanc formation and consists of variable cherty, fossiliferous limestone with some minor shale partings.

b) 'Aquifer Vulnerability Index' (AVI) for the site is considered "high" for the Niagara Peninsula source zone protection area due to the coarse-textured glaciolacustrine deposits for relatively thin overburden areas to be present within the Haldimand Clay Plain. This AVI rating assesses the potential for vertical infiltration of contaminants through the shallow overburden into the underlying bedrock formations.

c) Overburden thickness underlying site ranges from approximately 0.5 metres to 10.5 metres where the thickness increases from south to north across the site with the thickest depth underlying the wetland/woodlot.

Although there are substantial monitoring sites within the existing extraction operation (Pit 2 and 3), additional borehole and well installation occurred to augment the level of documentation and to provide in-depth knowledge of the subject site. This work involved ten new well locations and included both a shallow and deep well for a total of (20) twenty monitoring wells.

In summary, the report calculated that the estimated radius of groundwater level drawdown (zone of influence) associated with the dewatering of the proposed quarry extension to be 700 metres to 1,000 metres.

Hydrogeological recommendations include:

- The ongoing monitoring of on-site wells with groundwater levels taken monthly and water quality samples taken every five years. Groundwater quality parameters to be tested for include:

General Chemistry:	pH, EC, TDS, Hardness
Nutrients/Organic Indicators:	Total ammonia, Nitrate, Nitrite, DOC, Orthophosphate
Major and Minor Ions:	Alkalinity, calcium, chloride, magnesium, potassium, sodium, sulphate, anion sum, cation sum.
Dissolved Metals:	aluminum, antimony, arsenic, barium, beryllium, boron, cadmium, chromium, cobalt, copper, iron, lead, manganese, molybdenum, nickel, phosphorous, selenium, silicon, silver, strontium, thallium, titanium, uranium, vanadium, zinc.

  Wells to be monitored include:

MW17-1S,	MW17-1D,
MW17-2S,	MW17-2D
MW17-3S,	MW17-3D
MW17-4S,	MW17-4D
MW17-5S,	MW17-5D,
MW17-6S,	MW17-6D
MW17-7S,	MW17-7D
MW17-8S,	MW17-8D
MW17-9S,	MW17-9D,
MW17-10S,	MW17-10D.

- Three additional monitoring wells are to be installed prior to quarrying and are shown on the Site Plans to provide additional observation points. These wells will be monitored at the same frequency as the existing wells.

- Monitoring wells within the extraction area will progressively be mined out/removed as the quarry expands.

- A monitoring and response program is in place for the existing quarry to detect groundwater level drawdown at the monitoring well locations. A response program will be initiated, if required, to evaluate potential impacts and implement operational measures, or contingency measures, to prevent an interruption of the water supply or to restore the supply. This monitoring and response program will include all residences within 1,000 metres of the licence.
- In order to implement appropriate response actions in a timely manner, the licensee will retain qualified personnel in the areas of hydrogeology and will have water well contractors and a plumbing contractor on retainer in the event that the need for these services arises.
- The monitoring program will be discontinued one the quarrying is completed and the quarry will be allowed to flood through natural surface water and groundwater inflows, and the groundwater will recover to static conditions.
- If private well complaints were to occur, a Private Well Complaints Response Program has been prepared that will the decision process to be followed when a well interference complaint is received and a review of several mitigation strategies that could be implemented to affect the supply of surrounding water wells, to counteract the effect of quarry-related groundwater level drawdown, if required, based on the results of the monitoring and complaints response program.

8.9 Land Use Compatibility / Sensitive Land Use Study
(Appendix K)

The Land Use Compatibility/Sensitive Land Use Study been completed as a summary of the following reports:

- A Noise (Acoustical) Impact Study is attached hereto as Appendix B. The report was prepared by Golder Associates Inc. by J. Tomaselli and is dated December 2020, and updated December, 2021.
- The Air Quality (Dust) Impact Study is attached hereto as Appendix D. The report was prepared by Golder Associates Inc. by E. Lau and is dated December 2020, and updated December, 2021.
- A Blasting (Vibration) Impact Study is attached hereto as Appendix F. The report was prepared by Golder Associates Inc. by D. Corkery J. and is dated July 2020, and updated October, 2021. CV for D. Corkery is attached to this report.

The Land Use Compatibility/Sensitive Land Use Study was requested by the Region as part of the Pre-Submission Consultation. The report has been compiled by IBI Group and is attached hereto as Appendix K.

The report summarized and identified those residents defined interchangeably as Points of Receivers, Sensitive Receptors and Receptors, primarily those in closest proximity to the proposed quarry. The report also highlighted the individual recommendations from each of the reports and identified where there was critical cross-over between disciplines as it related to noise and blasting, perimeter berms and hours of operation.

The report concluded that based on the extensive and comprehensive recommendations from each individual report, and the Operational Notes where there were common elements between the disciplines, that no outstanding issues were identified. Based on that, the report provided no additional recommendations.

8.10 Natural Environment Level 1 and 2 (EIS) (Appendix L)

A Natural Environment Level 1 and 2 (EIS) has been completed and is attached hereto as Appendix L and was prepared by Golder Associates Inc. by H. Melcher and L. Owens dated October 2020, and updated November, 2021. The CV for H. Melcher and L. Owens are attached to that report.

The Natural Environment Level 1 and 2 (EIS) was prepared to satisfy numerous policy requirements including:

- Provincial Policy Statement 2020
  Policy 2.1 Natural Heritage
  Policy 2.5 Mineral Aggregate Resources
- Growth Plan for the Greater Golden Horseshoe 2014
  Policy 4.2.2 Natural Heritage System
  Policy 4.2.3 Key Hydrologic Features, Key Hydrologic Areas and Key Natural Heritage Features
  Policy 4.2.4 Lands Adjacent to Key Hydrologic Features and Key Natural Heritage Features
- Region of Niagara Official Plan (2014)
  7.B.1.6 Natural Environment
- City of Port Colborne Official Plan (2017)
  Policy 4.1 Natural Heritage Features
  Policy 4.2 Environmental Protection Areas
  Policy 4.3 Environmental Conservation Areas
- Niagara Peninsula Conservation Authority (NPCA) Policy Document: Policies For The Administration Of Ontario Regulation 155/06 And The Planning Act (2018)
  Policy 8.0 Wetlands
  Policy 8.2.2 Development and Interference within a Wetland
  Policy 9.1.1 Watercourses
  Policy 9.1.2 Need for an EIS/Hydrological Study
  Policy 11.1 Municipal Drains

In addition to these Policy requirements, the Provincial Standards for a Category 2 Licence under the Aggregate Resources Act (2.2.3 and 2.2.4) require the completion of this study.

As a result of numerous in-field site visits by Golder staff, an extensive list of plants and animal species were identified, and each assessed as follows:

SPECIES	ASSESSMENT	IMPACT ANALYSIS	RECOMMENDED MITIGATION
Habitat of Endangered or Threatened Species			
a) Bank Swallow	Potential foraging and nesting habitat.	Identified foraging and nesting habitat will not be disturbed and foraging habitat not limited to the subject site.	Avoidance
b) Barn Swallow	No active nesting site nor suitable foraging.	n/a	
c) Bobolink	Breeding in hayfields	Normal agricultural crop rotation practices will result in the removal of existing hayfields.	Surveys will be conducted prior to vegetation removal to confirm that the nesting habitat is no longer present.

SPECIES	ASSESSMENT	IMPACT ANALYSIS	RECOMMENDED MITIGATION
d) Chimney Swift	No natural or man-made nests or roots but natural tree cavities may exist	Identified suitable nesting habitat will not be altered.	Avoidance
d) Eastern Meadowlark	Suitable habitat during breeding season.	Normal agricultural crop rotation practices will result in the removal of existing hayfields.	Surveys will be conducted prior to vegetation removal to confirm that the nesting habitat is no longer present.
e) Bats Little Brown Myotis Northern Myotis Tri-coloured bat Eastern small-footed Myotis	Moderate potential for suitable habitat off-site.	No maternity roost or hibernation habitat was identified on-site and any such potential habitat will not be altered. Avoidnace	Avoidance
f) Fish	East Wignell Drain: No fish observed in on-site ponds but colonized fish may be present. Off-site ponds are aggregate related and not connected to any fish-bearing waterbody.	The drain is expected to be realigned by the City of Port Colborne. Although development of the quarry will remove part of the drainage area, flow is anticipated to be maintained or increased through discharge from quarry dewatering	None
Significant Wetlands Beaver Dam Creek Wetland Complex PSW ithin drawdown ZOI	Upper Wignell Drain Wetland Complex requires completion of an EIS	• Effect of drawdown not expected to –ve effect the ecological function of the wetland. • Section 7.4 of the report specifically address EIS issues. • No part of the PSW will be removed, although a part of the PSW is within the ZOI of groundwater discharge, no negative impacts are anticipated.	Avoidance
Significant Woodlands Deciduous Swamp (WD1, SWD3-2)	The woodland meets criteria as a ‘significant woodlot.	▪ No parts of this feature will be removed. ▪ Woodlot underlain by thick layer of clay so proposed quarry dewater will not impact swamp characteristics.	There will be a setback of 10.0 metres established from the dripline of the significant woodland. Plantings, as part of the rehabilitation plan, are recommended to increase connectivity between this woodland

SPECIES	ASSESSMENT	IMPACT ANALYSIS	RECOMMENDED MITIGATION
		▪ Drainage area contributing to the wetland will remain largely unchanged. ▪ Animal movement corridors between the deciduous swamp and offsite features will remain unchanged.	and the woodland features located offsite, north of Second Concession Road.
Significant Valleylands	Municipal drains do not meet the criteria to be considered significant valleylands.	n/a	
Significant Areas of Natural and Scientific Interest	n/a		
Significant Wildlife Habitat			
Candidate Landbird Migratory Stopover Habitat		All candidate land bird migratory stopover habitat SWH is located outside of the proposed limit of extraction, no negative impacts are anticipated.	Avoidance
Candidate Woodland Bat Maternity Roost Habitat		All candidate bat maternity roost SWH is located outside of the proposed limit of extraction and no negative impacts are anticipated.	Avoidance
Amphibian Wetland Breeding Habitat		Pond 3 provides breeding habitat for American bullfrog. This pond will be removed.	Mitigation includes replacement habitat as part of the rehabilitation plan to offset the negative impacts.
Species of Conservation Concern Necklace sedge		All confirmed habitat for necklace sedge is located outside of the proposed limit of extraction in the deciduous swamp (SWD3-2) on the site, no negative impacts are anticipated.	Avoidance
Species of Conservation Concern Eastern wood-pewee		All eastern pewee habitat is located outside of the proposed limit of extraction, and no negative impacts are anticipated.	Avoidance
Species of Conservation Concern		All wood thrush habitat is located outside of	Avoidance

SPECIES	ASSESSMENT	IMPACT ANALYSIS	RECOMMENDED MITIGATION
Wood thrush		the proposed limit of extraction, and no negative impacts are anticipated.	
Species of Conservation Concern Grasshopper sparrow		Nesting habitat on the site has been created by cyclical agricultural crop rotation practices. It is anticipated that no nesting habitat will be present on the site at the onset of quarry operational activities.	Surveys will be conducted prior to vegetation removal to confirm that the nesting habitat is no longer present.
Species of Conservation Concern Snapping turtles		The Humberstone Speedway ponds provide habitat for snapping turtles. These ponds will be removed.	Mitigation in the form of replacement habitat as part of the rehabilitation plan will offset the negative impacts.
Species of Conservation Concern monarch		Small areas of foraging habitat will be removed.	Mitigation in the form of planting milkweed during site rehabilitation will offset any negative impacts.
Species of Conservation Concern Common night		Habitat may be present in the study area outside of the limit of extraction, no negative impacts are anticipated.	Avoidance
Species of Conservation Concern Woodland vole		Habitat may be present in the study area outside of the limit of extraction, no negative impacts are anticipated.	Avoidance
Species of Conservation Concern Heart-leaved Tearthumb		Habitat may be present in the study area outside of the limit of extraction, no negative impacts are anticipated.	Avoidance

Recommendations of the report include that the Progressive and Final Rehabilitation Plan include:

1. Sediment/erosion controls will be implemented adjacent to natural features during site preparation and as needed during operations
2. Prior to the removal of vegetation in the agricultural fields on the site, a biologist should confirm that no suitable habitat for bobolink and eastern meadowlark is present. If habitat is confirmed to be present and in use by bobolink or eastern meadowlark, permitting or registration under the ESA may be required to remove habitat.
3. Prepare a Tree Preservation Plan for the site in accordance with City guidelines
4. Standard Best Management Practices to control noise and dust impacts on adjacent natural features will be implemented

5. Implement standard best management practices, including sediment and erosion controls, spill prevention, etc. during the construction phase of the project.
6. A groundwater monitoring program will be implemented to monitor for drawdown as the quarry expands. The data could be used to assess unanticipated effects on natural environment features.
7. The site will be rehabilitated in accordance with the requirements of the rehabilitation plan developed with ecological concepts from this report.
8. Prior to the removal of the Ponds 1, 2, 3, and 4. A survey should be conducted to determine if fish are present. If fish are present, a permit to collect fish for scientific purposes and direction from the MNRF will need to be obtained prior to relocation of the fish in order to avoid contravening the *Fisheries Act.*
9. Prior to the vegetation removal and stripping, a habitat survey will be conducted to confirm that standard agricultural practice (crop rotation) has resulted in the removal of the hay fields on the site and that no habitat for bobolink, eastern meadowlark and grasshopper sparrow is present.
10. A wetland vegetation monitoring program will be implemented in the deciduous swamp (SWD3-2) located at the north end of the site to monitor for impacts associated with quarry operations. Baseline monitoring will be conducted the summer prior to the start of extraction Phase 2.
11. Wetland and aquatic plants that may be planted in the nearshore or shoreline areas will include shrubs such as red-osier dogwood (*Cornus sericea*) and slender willow (*Salix petiolaris*), and herbaceous plants such as water plantain (*Alisma plantago-aquatica*), lake sedge (*Carex lacustris*), swamp milkweed (*Asclepias incarnata*), softstem bulrush (*Schoenoplectus tabernaemontani*), and common cattail (*Typha* spp.). Shallow wetland habitats will be created through construction of submerged benches, approximately 0.25 to 0.75 metres deep. Shallow emergent marsh vegetation (i.e., herbaceous species listed above) will be planted in water ±0.15 metres deep and extend ±5 metres from the shore and be interspersed with cover structures (e.g. boulders and root wads) in the shallow shoreline wetland areas. Organic material and topsoil will be added to the shoreline areas to promote shoreline vegetation. Basking logs, nesting platforms and boxes will be created for turtle, waterfowl and swallows respectively. This habitat will be designed to be suitable as snapping turtle aquatic habitat and bullfrog breeding habitat.
12. Upland areas will be seeded with a mix of grasses and legumes consisting of native, non-invasive species. It is recommended that common milkweed be planted in upland areas to provide host plants for monarch caterpillars. Where terrestrial nodal plantings are included on the side slopes, they will include a mixture of coniferous and deciduous tree species to promote species diversity and provide a variety of species to compensate for any substrate deficiencies. The species may include white pine, sugar maple, red oak, trembling aspen, and white birch, with a secondary focus on species such as choke cherry (*Prunus virginiana*), alternate-leaved dogwood (*Cornus alternifolia*), highbush cranberry (*Viburnum opulus*), nannyberry (*Viburnum lentago*) and serviceberry (*Amelanchier* spp.). It is recommended that ash (*Fraxinus* spp.) species in rehabilitation plantings be avoided due to the invasion of emerald ash borer.
13. The segment of Carl Road that bisects the deciduous swamp is to be rehabilitated following the decommissioning of the road. Excavations in three or four areas along the length of the road should be created to improve surface water drainage. Plantings along this segment of Carl Road should include the dominant tree and shrub species found in the deciduous swamp including silver maple, pin oak, swamp white oak, bur oak, red maple, and spicebush.

    Invasive shrub species including multiflora rose, common buckthorn, and Tartarian honeysuckle have become established in this area and may prevent the successful

establishment of the native plantings. These invasive shrubs should be removed prior to the planting of Carl Road.

14. The setback area at the north end of extraction area 3 and east of the deciduous swamp (Licence 4444) be supplemented with additional plantings to enhance connectivity and wildlife movement opportunities between the deciduous swamp and the hedgerow located east of the site woodland located northeast of the site across Second Concession Road. This area currently consists of a cultural meadow. The establishment of a wooded area will create a corridor linking the north end of the deciduous swamp with the forested areas offsite, including the significant woodland located between Carl Road and Babion Road. These additional plantings will also enhance ecological connectivity and facilitate wildlife movement between these features. Native tree and shrub species plantings should be selected based on their suitability for the soils and moisture regime in those areas and may include: red oak, trembling aspen, eastern white cedar, red maple, basswood, bur oak, white pine, serviceberry species, gray dogwood (*Cornus racemosa*) and staghorn sumac (*Rhus typhina*).
15. The area north of the existing quarry (Pit 3) and west of the northern end of the deciduous swamp is to be rehabilitated to enhance connectivity and wildlife movement between the deciduous swamp and the significant woodland located north of Second Concession Road between Carl Road and Babion Road. These two significant woodlands are separated by Second Concession Road and distance of approximately 70 metres. The area recommended for rehabilitation consists of a berm vegetated with terrestrial grasses and forbs and a sparsely vegetated area north of Pit 3.
16. All plantings (i.e., nodal plantings) included in the rehabilitation plan will be locally native, non-invasive species that create habitat in the short term and promote natural succession processes. The sourcing of plantings should consider the regionally adapted genetics of the species. Plantings from local sources are likely to be well adapted to the local climate and growing conditions and may have a higher likelihood of successful establishment. Therefore, plantings will be procured from local sources to the extent possible.
17. All rehabilitated side slopes are to be vegetated with a seed mixture capable of:

    - Rapid germination and growth,
    - Controlling erosion.
    - Maintaining or enhancing soil fertility.

    The seeding is to be established in a timely manner and if necessary, facilitated by the application of fertilizer, water and/or additional seeding.
18. 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).

8.11 Comprehensive Rehabilitation Strategy (Appendix M)

A Rehabilitation Strategy is attached hereto as Appendix M and was prepared by IBI Group by D. Sisco and dated September 2020, and updated December, 2021. The CV for D. Sisco is attached to this report.

The Rehabilitation Strategy was prepared to satisfy numerous policy requirements including:

- Provincial Policy Statement 2020
  Policy 2.5 Mineral Aggregate Resources
- Growth Plan for the Greater Golden Horseshoe 2014
  Policy 4.2.7 Mineral Aggregate Resources

- Region of Niagara Official Plan (2014)
  Policy 6.C Mineral Resources
- City of Port Colborne Official Plan (2017)
  Policy 10.2 Aggregate / Extractive Industrial Sites

In addition to these Policy requirements, the Provincial Standards for a Category 2 Licence under the Aggregate Resources Act (1.4 and 2.1.5) require the demonstration of progressive and final rehabilitation.

The report confirmed from other technical documents that there is a substantial volume of high quality aggregate resources located below the groundwater level and that the most practical method of extraction is through dewatering. This involves lowering the local groundwater levels so that extraction can occur in a dry environment. This same form of dry extraction is how the adjacent and active Pit 3 operates. Once full extraction is complete, the dewatering pumps are removed and over-time, the groundwater levels will rebound resulting in the creation of a large lake that will be on 8.0 to 16.0 metres deep.

As noted above, because the Pit 3 Extension will be a seamless transition of the Pit 3 operation as the quarry moves eastward and worked together to a similar final quarry floor elevation, the final rehabilitation will be undertaken in concert. The result will be the creation of a joint lake (Pit 3 and Pit 3 Extension) that is 177 hectares in size. The lake will be designed with variable slopes to provide a range of ecological habitat and the shoreline designed to create a range of aquatic habitats including wetlands and shallow ponds. The shoreline will also be planted with a variety of aquatic plants and upland species which are both native and non-invasive.

The creation of a large lake on the subject lands will be reflective of the proposed final land use of the currently exhausted Pit 2 lands to the west, (between Snider Road and Babion Road). The timing of those lands becoming a lake is contingent upon the eventual removal of the haul route between Pit 3 (and initially/temporarily Pit 3 Extension) and the main processing plant located in Pit 1. This is anticipated to occur in the next 8 to 12 years.

Upon the subject lands becoming a lake (including the Pit 3 lands), will not result in any land use conflicts with the existing neighbouring land uses which include: i) non-farm rural residential, ii) agricultural, iii) commercial and iv) natural environment lands. At this juncture, PCQ intends that the subject lands will be held in private ownership.

8.12 Social Impact Assessment (Appendix N)

A Social Impact Assessment is attached hereto as Appendix N and was prepared by IBI Group by D. Sisco and dated January 8, 2021, and updated December, 2021. CV for D. Sisco is attached to this report.

The Social Impact Assessment was prepared to satisfy numerous policy requirements including:

- Provincial Policy Statement 2020
  Policy 2.5 Mineral Aggregate Resources
- Growth Plan for the Greater Golden Horseshoe 2014
  Policy 4.2.7 Mineral Aggregate Resources
- Region of Niagara Official Plan
  Policy 6.C – Mineral Resources
  Policy 14.D.5 - Implementation
- City of Port Colborne Official Plan (2017)
  Policy 10.2 Aggregate / Extractive Industrial Sites

The report highlights a duality of social impacts: i) those identified as being specifically to 'direct' social interactions with the proposed quarry and including:

- Noise (Acoustical)
- Air Quality (Dust)
- Blasting / Vibration
- Traffic
- Visual

and ii), all other land use impacts which may have 'associated' social interactions with the proposed quarry and which include:

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

Each of the above investigations identified potential impacts and provided recommendations to address such social impacts and include Site Plan operational design components such as: direction of extraction, phasing design, location of processing plant, location and height of perimeter berms, siting of quarry entrance/exit, hours of operation, annual tonnage restrictions, incorporation of and ultimate removal of Carl Road, use of vegetation on perimeter berms, entrance and elsewhere as applicable, safeguarding against erosion of perimeter berms, maintenance of entrance (sweeping), utilization of on-site water trucks, use of seismometers where applicable, etc.

It also includes off-site commitments including the requirement of off-site entrance/road upgrades onto Highway 3.

Although difficult with this site (as with all below water quarries), PCQ will undertake as much progressive rehabilitation as possible during the life of the quarry, but until the quarry extraction is completed and the dewatering pumps are turned off, the quarry will then be able to fill as a large lake.

Further, each of the recommendations have been included onto the Site Plans and worded to ensure they're action directives (i.e., shall, will, must), vs. passive (i.e., may, should). As well, all Site Plan Notes and the Site Plans themselves are fully enforceable by provincial staff at MNRF.

The report concluded that based on the extensive and comprehensive recommendations from each individual report, that no additional recommendations were necessary.

8.13 Traffic Impact Study (Appendix O)

A Traffic Impact Study (TIS) has been completed and is attached hereto as Appendix O and was prepared by IBI Group, D. Hook and dated October 2020. CV for both E. McLaren and D. Hook is attached to that report.

The TIS was prepared to satisfy numerous policy requirements including:

- Provincial Policy Statement 2020
  Policy 2.5 Mineral Aggregate Resources

- Region of Niagara Official Plan (2014)
  9.H.3 Major Goods Movement Facilities and Corridors

- City of Port Colborne Official Plan (2017)
  Policy 4.1 Natural Heritage Features
  Policy 4.2 Environmental Protection Areas
  Policy 4.3 Environmental Conservation Areas

In addition to these Policy requirements, the Provincial Standards for a Category 2 Licence under the Aggregate Resources Act (2.2.4) require the completion of this study.

As noted above, the intent of PCQ is to operate Pit 3 Extension initially by hauling the rock westward using off-road quarry trucks along the existing haul road through Pit 3, crossing Babion Road at grade, through Pit 2, crossing **Snider** Road at grade and to Pit 1. In Pit 1 the rock will be processed. The material will then be loaded into dump trucks and hauled to the market via Ramey Road and to Highway 140.

During Phase 1 extraction, PCQ intends to construct a new processing plant in the northern portion of Pit 3 and which will then necessitate the construction of a new quarry entrance. Based on pre-submission discussions with the Region and City, it was agreed by that the preferred location for such an exit/entrance was directly onto Highway 3 and just prior to the submission, confirmation was received from MTO that they were receptive to such an access,, subject to it being aligned with Weaver Road to the south.

Based on that scenario, IBI completed their Traffic Impact Study. The report assumed the quarry will generate 154 trucks per day with 15.4 trucks during the a.m. peak hour. Intersection capacity analysis was conducted for both existing and future conditions and all were shown to operate at an acceptable Level of Service during all scenarios. No geometric modifications or traffic signalization will be required at any of the study intersections, except for the Highway 3 access point.

Recommendations from the report include:

- Highway 3: Construction of a minimum 35 metre long eastbound left-turning lane.
- Highway 140: Based on an existing condition deficiency, the length of the southbound right-turn taper should be increased to provide sufficient space for deceleration.

The Highway 3 recommendation is noted in Appendix U (Site Plan Notes) attached hereto.

8.14 Tree Preservation Plan (Appendix P)

A Tree Preservation Plan has been completed and is attached hereto as Appendix Q and was prepared by IBI Group, D. Giovanatto and dated October 16, 2020. CV for D. Giovanatto is attached to that report.

The Tree Preservation Plan was prepared to satisfy the following;

- Region of Niagara Official Plan
  Policy 7.B.1.19 - Core Natural Features

- City of Port Colborne Official Plan
  Policy 4.1.2.5 - Natural Heritage Features:

Within the defined Limit of Extraction as identified on the Site Plans, and specifically within the proposed Phase 2, the Natural Environment Report (Appendix L) observed and defined an area referenced as FOD7-2 (Fresh-Moist Ash Lowland Deciduous Forest). This woodlot is located immediately south of an existing municipal drain, East Wignell Drain, which follows the southern boundary of the SWD3-2 feature and continues in a south-east direction to the eastern site boundary through a mixed deciduous swamp/deciduous forest located adjacent the site. Further north of this feature is another deciduous forest located adjacent the eastern site boundary.

Since the trees within FOD7-2 are proposed to be removed, a Tree Preservation Plan was prepared to confirm the quality status of those trees and to ascertain impact of their potential removal.

The Tree Preservation Report separated the approximate 1.2 Ha. FOD7-2 woodlot into three separate Vegetation Units, (A, B, and C), with A and B corresponding to and paralleling the

Wignell Drain and Vegetation Unit C reflecting the larger woodlot unit. Overall, the woodlot contains 454 trees and includes the following variety of species:

Manitoba Maple	Pear
Silver Maple	White Spruce
White Birch	White Pine
Shagbark Hickory	White Oak
Hawthorn Sp.	Swamp White Oak
Green and Red Ash	Red Oak
Eastern Red Cedar	Pin Oak
Eastern Larch	Willow
Eastern Cottonwood	Eastern White Cedar
Trembling Aspen	White Elm

In summary, the Tree Preservation Report concluded that "Trees located within FOD7-2 community including Vegetation Units 'A', 'B', and 'C' are recommended for removal to permit the Phase 2 extraction work of the proposed quarry expansion. The presence of Emerald Ash Borer damage, high occurrence of Ash trees, pioneer species and possible restoration plantings, within the study area as well as the relatively young age of the trees present on site contribute to a low preservation priority for the FOD7-2 feature.

The Report also provide numerous recommendations for tree protection for the surrounding woodlot areas that are to be retained.

8.15 Visual Impact Study (Appendix Q)

A Visual Impact Study has been completed and is attached hereto as Appendix P and was prepared by IBI Group by D. Sisco and dated November 2020, and updated December, 2021. CV for D. Sisco is attached to this report.

The Visual Impact Study was prepared to satisfy a request by Niagara Region as part of the Pre-Submission Consultation and as per policy:

- Provincial Policy Statement 2020
  Policy 2.5 Mineral Aggregate Resources
- Growth Plan for the Greater Golden Horseshoe (2014)
  Policy 4.2.7 Mineral Aggregate Resources
- Region of Niagara Official Plan (2014)
  Policy 6.C – Mineral Resources
  Policy 14.D.5 - Implementation
- City of Port Colborne Official Plan (2017)
  Policy 10.2 Aggregate / Extractive Industrial Sites

In addition to these Policy requirements, the Provincial Standards for a Category 2 Licence under the Aggregate Resources Act (2.2.4) require the completion of this study.

Findings of the report included identifying the relevant sensitive land uses in proximity to the purposed quarry and included 20 residences and 3 transitory views. The report also evaluated the significant quarry activities prior to, during and post-extraction that have the potential to result in visual impacts to these receivers.

The Visual Impact Analysis took into account the local topography, separation distances and existing vegetation and through the preparation of eight specific cross-sections (A-A' to H-H'), that covered five view-sheds; visual gaps in the screening were highlighted and this resulted in numerous recommendations. These recommendations included:

1. *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 eastern boundary of the property extending south to Main Street and built with a 3:1 slope.*
Berm F	*A 4.0 metre high along the Main Street frontage built with a 4:1 slope on the external side.*
Berm G	*A 3.0-metre-high berm along the western property boundary associated with 1326 Main Street.*

2. *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.*
3. *Both coniferous and deciduous trees are to be planted between the berm and the Highway 3 (Main Street) and Miller Road boundary fence.*
4. *That all berms be immediately vegetated with a grass type legume ground cover to avoid erosion, sedimentation and dust.*

Based on the identification of the numerous viewsheds and individual visual sensitive receivers, views of the proposed Pit 3 Extension quarry for the abutting sensitive receivers have been sufficiently visually screened subject to the implementation of the above noted recommendations.

Refer also to the Visual Impact Assessment attached as Appendix Q and the Site Plan Notes included as Appendix U.

9 Summary and Recommendations

Port Colborne Quarries Inc. is making submissions for the re-designation, rezoning and licensing to permit aggregate extraction on 106.3 hectares (262.7 acres) of land referenced as:

Part of Lots 17, 18 and 19, Concession 2,
(formerly Township of Humberstone)
and Plan 59R-16702
City of Port Colborne,
Regional Municipality of Niagara.

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.

The specific planning approval applications are as follows:

- 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 lands from Agriculture to Mineral Aggregate Operation
    - To reduce the minimum setback from a Provincial Highway from 90.0 metres to 30.0 metres
    - Additional permitted use to be applied to the existing houses at 1252 Main St., 1326 Main St., and 1645 Second Concession Road, including:
        - Dwelling, detached
        - Uses structures and buildings accessory thereto.
- Application to the Ministry of Natural Resources, under the Aggregate Resources Act for a Category 2 Licence (Class A Quarry Below Water).

The annual production volume being requested is **1,000,000 tonnes,** and will be extracted in three phases proceeding generally west to east from the existing Pit 3 active quarry face to Miller Road, and south to north toward Second Concession Road. Extraction will occur to a varying depth below the existing surface grade by 14.0 to 20.0 metres and 8.0 to 16.0 metres below the groundwater level. In order to extract below dewatering will occur, which will be a continuation of the existing operational method.

Initially, material extracted will be hauled westward through Pit 3, Pit 2 and to the existing processing plant located in Pit 1 (adjacent to Highway 140) and once processed, (crushed, screened, washed, blended), it will be shipped to the market via Ramey Road and Highway 140. During the extraction of Phase 1, a new processing plant will be constructed within Pit 3 and at that time, a new quarry entrance will be constructed onto directly onto Highway 3 at the Weaver Road intersection. The life of the quarry is anticipated to be 35 years.

As each portion of the quarry is progressively extracted, the completed quarry faces will begin to be progressively backfilled with side slopes varying from 2:1 to 4:1 with wetland enhancement ponds constructed at the final lake elevation. Once the quarry naturally fills with water, it will become a 177 hectare lake as it will be joined with the Pit 3 lands with a final rehabilitation use of passive recreation and ownership held by PCQ.

As identified by the Pre-Submission Consultation (April 23, 2020) and as required by the numerous applicable planning documents (PPS, Growth Plan, Region of Niagara Official Plan and City of Port Colborne Official Plan), Port Colborne Quarries Inc. retained experts to undertake the following technical studies. Each report identified the pertinent and potential impacts to the surrounding sensitive land uses and consequently provided Operational Site Plan recommendations to ensure that all impacts would be mitigated, attenuated and/or buffered. In some situation, ongoing monitoring has also been recommended (e.g., hydrologic) to ensure that during the life of the quarry, that necessary trigger levels are not breached.

Studies completed include:

- Acoustical (noise) Impact Study (Appendix B).
- Agricultural Impact Assessment [AIA] (Appendix C).
- Air Quality Impact Study (Appendix D).
- Archaeological Assessment Stage 1 and 2 [Background Study and Property Assessment] (Appendix E i).

- Archaeological Assessment - Supplementary Documentation (Appendix E ii).
- Blasting (Vibration) Impact Study (Appendix F).
- Cultural Heritage Screening Report (Appendix G).
- Financial Impact Assessment / Economic Benefits Report (Appendix H).
- Hydrological Assessment [Surface Water] (Appendix I).
- Hydrogeology [Groundwater] (Appendix J).
- Land Use Compatibility / Sensitive Land Use Study being a summarization of the Acoustical (noise) Impact Study, Air Quality Impact Study, and the Blasting (vibration) Impact Study. (Appendix K).
- Natural Environment Level 1 and 2 [EIS] (Appendix L).
- Comprehensive Rehabilitation Strategy (Appendix M).
- Social Impact Assessment being a focused summarization of the following reports, Acoustical (noise), Blasting / Vibration, Traffic, Visual, and an overview of Archaeology, Cultural Heritage, Surface water, Groundwater, and Natural Environment (Appendix N).
- Traffic Impact Study [TIS] (Appendix O).
- Tree Preservation Plan (Appendix P).
- Visual Impact Assessment (Appendix Q).

The Recommendations from each of these reports are highlighted in the Site Plan notes which are attached hereto as Appendix U.

10 Conclusion

As a result of the design techniques used in the Site Plans, with the inclusion of the recommendations from all the technical studies, it is our opinion that all potential impacts have been identified and will be minimized to acceptable levels.

In conclusion, it is recommended that this Planning Justification Report in conjunction with the appendices, fulfills the requirements of the Regional and City Official Plan policies and that this be the basis for approving all the land-use planning applications and the ARA Class A – Category 2 Licence.

Yours truly

IBI GROUP

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

DRS/baw
Encl.

DAVID R. SISCO
REGISTERED
PROFESSIONAL
PLANNER
R.P.P.

I hereby certify that this Planning Justification Report 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

https://ibigroup.sharepoint.com/sites/Projects/115774/Project Documents/10.0 Reports/PlanningJustificationReport/PTR_PCQI_- JART Comments - PlanningReport_Expansion.docx\2022-01-29\BW

APPENDIX A

MINUTES OF PRE-SUBMISSION MEETING OF APRIL 23, 2020

APPENDIX B

Noise (Acoustical) Impact Assessment, Golder Associates Inc. dated December 2020, and updated December 2021

APPENDIX C

Agricultural Impact Assessment, Colville Consulting Inc. dated September 22, 2020, and updated October 2021

APPENDIX D

Air Quality (Dust) Assessment, Golder Associates Inc. dated December 2020, and updated December 2021

APPENDIX E

APPENDIX E I:

STAGE 1 AND 2 ARCHAEOLOGICAL ASSESSMENT

APPENDIX E II

SUPPLEMENTARY DOCUMENTATION - STAGE 1 AND 2 ARCHAEOLOGICAL ASSESSMENT

APPENDIX F

Blasting (Vibration) Impact Assessment, Golder Associates Inc. dated July 2020, and updated October 2021

APPENDIX G

Cultural Heritage Screening Report: Golder Associates Inc. dated July 17 2020

APPENDIX H

Financial Impact Assessment / Economic Benefits, IBI Group dated July 6, 2020, and updated October 2021

APPENDIX I

Hydrological Assessment: Golder Associates Inc. dated August 2020, and updated December 2021

APPENDIX J

Hydrogeological Assessment, Level 1 / 2 Water Resources Study, Golder Associates Inc., dated July 2020, and updated October 2021

APPENDIX K

Land Use Compatibility / Sensitive Land Use Study, IBI Group, dated November December 2020, and updated December 2021

APPENDIX L

Natural Environment Level 1 & 2 Report (EIS), Golder Associates Inc., dated October 2020, and updated November 2021

APPENDIX M

Comprehensive Rehabilitation Strategy, IBI Group, dated September 2020, and updated December 2021

APPENDIX N

Social Impact Assessment, IBI Group, dated December 2020, and updated December 2021

APPENDIX O

Traffic Impact Study, IBI Group, dated October 20, 2020

APPENDIX P

Tree Saving Plan / Tree Preservation Plan, IBI Group, dated October 2020.

APPENDIX Q

Visual Impact Assessment, IBI Group, dated December 2020, and updated December 2021

APPENDIX R

Draft Regional Official Plan Amendment (ROPA)

THE REGIONAL MUNICIPALITY OF NIAGARA

BY-LAW NO.

A BY-LAW TO PROVIDE FOR THE ADOPTION OF AMENDMENT ___

TO THE OFFICIAL PLAN FOR THE NIAGARA PLANNING AREA

to permit the Port Colborne Quarries Inc. – Pit 3 Extension Quarry

WHEREAS subsection 22 of the Planning Act, 1990 states when the requirements of subsections (15) to (21), as appropriate, have been met and Council is satisfied that the plan as prepared is suitable for adoption,

WHEREAS it is deemed appropriate to further amend the Official Plan as adopted by Regional Council for the Niagara Planning Area,

NOW THEREFORE the Council of The Regional Municipality of Niagara enacts as follows:

1. That the text attached hereto is hereby approved as Amendment ___ to the Official Plan for the Niagara Planning Area.
2. That the Regional Clerk is hereby authorized and directed to give notice of Council's adoption in accordance with Section 17(23) of the Planning Act, 1990.
3. That this By-Law shall come into force and take effect on the day after the last day of appeal provided no appeals have been received.

THE REGIONAL MUNICIPALITY OF NIAGARA

Original signed on:_____
James Bradley, Regional Chair

Original signed on: _____
Ann-Marie Norio, Regional Clerk

Passed:

Amendment No. ___

To The Official Plan

for the Niagara Planning Area

PART “A” – THE PREAMBLE

The preamble provides an explanation of the Amendment including the purpose, location, background, and basis of the policies and implementation, but does not form part of this Amendment.

Title and Components
Purpose of the Amendment
Location of the Amendment
Background
Basis for the Amendment
Implementation

PART “B” – THE AMENDMENT
The Amendment describes the additions and/or modifications to the Official Plan for the Niagara Planning Area, which constitute Official Plan Amendment No. ___.
Map Change
Text Change

PART “C” – THE APPENDICES
The Appendices provide information regarding public participation and agency comments relevant to the Amendment, but do not form part of this Amendment.

PART "A" – THE PREAMBLE

TITLE AND COMPONENTS:

This document, when approved in accordance with Section 17 of the Planning Act, 1990, shall be known as Amendment ___ to the Official Plan of the Niagara Planning Area. Part "A" – The Preamble, contains background information and does not constitute part of this Amendment. Part "B" – The Amendment, consisting of map changes, constitutes Amendment ___ to the Official Plan of the Niagara Planning Area. Part "C" – The Appendices, does not constitute part of the Amendment. These Appendices contain information related to public involvement and agency comments associated with the Amendment.

PURPOSE OF THE AMENDMENT:
The purpose of this Amendment is to add to Section 13 the site specific policies to permit the Pit 3 Extension quarry operation. The amendment also includes the addition of the subject lands on Schedule D4 - *Mineral Resources* as a Licensed Pits and Quarries.

LOCATION OF THE AMENDMENT:
The amendment area is within the City of Port Colborne reflecting part of Lots 17, 18 and 19, Concession 2 (formerly the Township of New Humberstone) and Plan 59R 16702 and bounded by Reginal Road 84 (Miller Road), Provincial Highway 3 (Main Street) and Second Concession Road.

BACKGROUND
The subject lands are identified by the Niagara Region Official Plan Schedule D1 as being within a Potential Resource Areas: Stone. The applicant (Port Colborne Quarries Inc.) participated in Pre-Submission Consultation and subsequently submitted the requested and prescribed planning justification and technical reports to satisfy numerous planning instruments including the Provincial Policies Statement, (2014), Growth Plan for the Greater Golden Horseshoe (2014), Region of Niagara Official Plan (2014) and the City of Port Colborne Official Plan.

BASIS FOR THE AMENDMENT:

a) The Amendment was the subject of a Public Meeting held under the Planning Act, 1990 on_____. Public and agency comments were addressed as part of the preparation of this Amendment.

b) The Amendment will allow the Council of the City of Port Colborne to make a decision on the rezoning from Agriculture to Mineral Aggregate Operation and subsequently allow the Minister of Natural Resources and Forestry to make a decision to issue a quarry licence under the Aggregate Resources Act.

c) Based on the Region's review of the Planning Act, 1990, the Provincial Policy Statement (2014), the Provincial plans (2017), the Regional Official Plan, and public and agency consultation, Regional staff is of the opinion that the Amendment is consistent, or does not conflict, with Provincial and Regional policies and plans and, therefore, represents good planning.

IMPLEMENTATION:

Section 14, Implementation of the Official Plan for the Niagara Planning Area, shall apply where applicable.

PART "B" – THE AMENDMENT
Amendment ___
To the Official Plan for the Niagara Planning Area

The Official Plan for the Niagara Planning area is amended as follows:

Map Changes (attached)

"Schedule D4 – "Mineral Resources" is amended to add and the subject lands to the map denoting Licensed Pits and Quarries and the corresponding to the Legend.

Text Changes

The Official Plan for the Niagara Planning Area is amended as follows:

- Add to Section 13 the site specific policies to permit the Pit 3 extension quarry operation.

Part I – Modifications to Existing Policies

1. Add to Section 13 the site specific policies to permit the Pit 3 extension quarry operation.

13.G. _Land Use

Policy 13.G._._ Notwithstanding other policies in this Plan, an expansion to the existing Port Colborne Quarries Inc. quarry is permitted eastwardly on an approximately 80.3 hectare (198 acre) site located on the lands bounded by Regional Road 84 (Miller Road), Provincial Highway 3 (Main Street) and Second Concession Road, on Part Lot 17, 18, 19 Concession 2 and Plan 59R-16702 in the City of Port Colborne.

13.G._Servicing

Policy 13.G._._ Road Improvements

Part II – New Policies

None

APPENDIX S

Draft City of Port Colborne Official Plan Amendment (OPA)

THE CORPORATION OF THE CITY OF PORT COLBORNE

BY-LAW _____/___/__

BEING A BY-LAW TO ADOPT AMENDMENT NO. ___ TO THE OFFICIAL PLAN OF THE PORT COLBORNE PLANNING AREA

WHEREAS it is deemed expedient to further amend the Official Plan, heretofore adopted by Council for the City of Port Colborne Planning Area;

NOW THEREFORE the Council of the Corporation of the City of Port Colborne pursuant to Seection 17(22) of The Planning Act, R.S.O. 1990, enacts as follows:

1. The Official Plan Amendment No. ___ to the Official Plan for the City of Port Colborne Planning Area consisting of the attached explanatory text and mapping.
2. That the Clerk is hereby authorized and directed to make application to the Regional Municipality of Niagara for approval of the aforesaid Amendment No. ___ to the Official Plan for the Port Colborne Planning Area.
3. This By-Law shall come into force and take effect on the date upon which it is finally passed.

READ A FIRST, SECOND AND THIRD TIME AND FINALLY PASSED THIS ____ DAY OF _____ 20____.

_____

MAYOR

_____

CLERK

AMENDMENT NO. ____
TO THE OFFICIAL PLAN FOR THE
PORT COLBORNE PLANNING AREA

INDEX

THE STATEMENT OF COMPONENTS

AMENDMENT NO. ___
TO THE OFFICIAL PLAN FOR THE
PORT COLBORNE PLANNING AREA

THE STATEMENT OF COMPONENTS

PART A – The Preamble which does not constitute part of this Amendment.

Part B – The Amendment consisting of the following text and Schedule "A" and which constitutes Amendment ___ to the Official Plan for the Port Colborne Planning Area.

Part C – Definitions which also constitutes a part of this Amendment.

PART A – THE PREAMBLE

Purpose

The purpose of this Amendment is to add to add a Special Policy Area to permit the proposed Port Colborne Quarries Inc. - Pit 3 Extension quarry. The amendment also includes the addition of the subject lands on Schedule XX …….- *Mineral Resources to* Mineral Aggregate Operations

Location

The amendment area is within the City of Port Colborne reflecting part of Lots 17, 18 and 19, Concession 2 (formerly the Township of New Humberstone) and Plan 59R 16702 and bounded by Reginal Road 84 (Miller Road), Provincial Highway 3 (Main Street) and Second Concession Road.

Basis

a) The Amendment was the subject of a Public Meeting held under the Planning Act, 1990 on_____. Public and agency comments were addressed as part of the preparation of this Amendment.

b) The Amendment will allow the Council of the City of Port Colborne to make a decision on the rezoning from Agriculture to Mineral Aggregate Operation and subsequently allow the Minister of Natural Resources and Forestry to make a decision to issue a quarry licence under the Aggregate Resources Act.

c) Based on the City's review of the Planning Act, 1990, the Provincial Policy Statement (2014), the Provincial plans (2017), the Regional Official Plan, the City's Official Plan and public and agency consultation, City staff is of the opinion that the Amendment is consistent, or does not conflict, with Provincial, Regional policies and City policies plans and, therefore, represents good planning.

PART B – THE AMENDMENT

All of this part of the document entitled Part B- The Amendment, consisting of the following text and Schedule "C', as well as Part C – Definitions, constitutes Amendment No. ___ to the Official Plan for the Port Colborne Planning Area.

DETAILS OF THE AMENDMENT

The Official Plan for the City of Port Colborne Planning Area is hereby amended as follows:

The following text is inserted into G.12 of the Official Plan for the Port Colborne Planning Area:

(_) An expansion to the existing Port Colborne Quarries Inc. quarry is permitted and referred to as Pit 3 Extension being eastwardly on approximately 80.3 hectare (198 acre) site located on the lands bounded by Regional Road 84 (Miller Road), Provincial Highway 3 (Main Street) and Second Concession Road, on Part Lot 17, 18, 19 Concession 2 and Plan 59R-16702 in the City of Port Colborne.

The following changes are made to Schedule C: Mineral Aggregate and Petroleum Resources:

1. That the area be shown as Mineral Aggregate Operation and corresponding to the Legend.

Part C – Definitions which also constitutes a part of this Amendment.

APPENDIX T

Draft City of Port Colborne Zoning By-Law Amendment

DRAFT ZONING BY-LAW AMENDMENT

THE CORPORATION OF THE CITY OF PORT COLBORNE

BY-LAW NO. _____

BEING A BY-LAW TO AMEND ZONING BY-LAW 6575/30/18, AS AMENDED, RESPECTING LANDS KNOWN AS PART LOTS 17, 18 AND 19 CONCESSION 2 (formerly in the Township of Humberstone) AND PLAN 59R-16702, CITY OF PORT COLBORNE LOCATED SOUTH OF SECOND CONCESSION ROAD, WEST OF MILLER ROAD AND NORTH OF MAIN STREET.

WHEREAS, By-Law 6575/30/18, as amended, is a By-Law of the Corporation of the City of Port Colbrone restricting the use of land and the location and use of buildings and structures,

AND WHEREAS, the Council of the Corporation of the City of Port Colborne desires to amend the said By-Law:

NOW THEREFORE, and pursuant to the provisions of Section 34 of The Planning Act, R>S>O> 1990, the CORPORATION OF THE CITY OF PORT COLBORNE ENACTS AS FOLLOWS:

1. This amendment shall apply to those lands described on Schedule “A” attached to and forming part of this By-Law.

2. That the “Zoning Map” referenced as Schedule “A” forming part of By-Law 6575/30/18, as amended, is hereby amended by changing those lands described on Schedule “A” attached from A - (Agriculture) to MAO – (Mineral Aggregate Operation).

3. That notwithstanding 2 above, the Zoning Restrictions applicable to MAO – Mineral Aggregate Operations, forming part of By-Law 6575/30/18, as amended, be further amended to read: No pit, quarry or excavation shall be made or established within 15 metres of any lot line which does not abut a public street or 30 metres of any lot line which abuts any other public street.

4. That this By-Law shall come into force and take effect on the day that it is passed by Council, subject to the provisions of The Planning Act.

5. The City Clerk is hereby authorized and directed to proceed with the giving notice of the passing of this By-Law, in accordance with The Planning Act.

RED A FIRST, SECOND AND THIRD TIME AND FINALLY PASSED THIS ____ DAY OF _____, 202__.

_____
MAYOR

_____
CLERK

ZONING KEY MAP

APPENDIX U

Summary of Site Plan Notes updated December 2021