

Final

Financial Impact Assessment and Economic Benefits Port Colborne Quarries Inc. - Pit 3 Extension – Revised Report

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



Prepared for Port Colborne Quarries Inc.
by IBI Group
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Table of Contents

1	Introduction	1
1.1	Introduction & Key Findings.....	1
1.2	Study Requirements.....	2
1.2.1	FIA Objectives.....	2
1.3	Site Description.....	3
2	Land Value Assessment Analysis	4
2.1	Analysis of Comparable/Estimation of Assessment Value.....	4
2.2	Estimate of Annual Municipal Property Tax Revenue.....	5
2.3	Reduced Assessment Value of Properties within 1km.....	6
2.4	Net Tax Revenue Position.....	6
3	Economic Benefits	7
3.1	Aggregate Production & the Environment.....	7
3.2	Input-Output Multiplier Calculation.....	7
3.3	Economy.....	7
3.4	Jobs.....	8
3.5	Labour Income.....	8
4	Capital Impact Analysis	10
4.1	Review of Quarry Operations.....	10
4.1.1	Existing Quarry Operations.....	10
4.1.2	Pit 3 Extension Start-up and First Years of Operation.....	11
4.1.3	Pit 3 Extension Long Term.....	11
4.1.4	Long Term Mitigation and Monitoring Measures.....	12
4.2	Road Traffic – Impacts on Maintenance and Timing.....	12
4.3	Wignell Drain Re-alignment.....	13
4.4	Summary - Capital Impact Assessment.....	13
5	TOARC Fees	14
5.1	Aggregate Resources Act (ARA) Aggregate Levy.....	14

Table of Contents (continued)

6	Summary and Conclusion	15
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1 Introduction

1.1 Introduction & Key Findings

This Financial Impact Assessment and Economic Benefit Analysis (FIA) has been prepared for Port Colborne Quarries Inc. (PCQ) and supplements IBI Group's *Planning Justification Report for the Pit 3 Extension* (Planning Report). Reference should be made to the Planning Report for further context and an assessment of the proposed development's consistency and conformity with Provincial, Regional and City planning policies.

The purpose of this FIA is to demonstrate that the proposed Pit 3 Extension will have "minimal negative financial impact" on Niagara Region/the City of Port Colborne or their taxpayers, and to illustrate any direct or indirect financial benefits/costs to the affected municipalities. Based on IBI Group's analysis, the following summarizes the findings of this report:

- **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. Using the Region's and City's 2021 tax rates, the quarry use would generate \$16,765 for the Region and \$22,920 for the City in annual property tax revenues; an increase of \$6,665 and \$9,120 when compared to the existing use revenues. When factoring the downward adjustment for residential uses within 1km of the site, the quarry use of the Extension Lands still results in a net positive tax revenue for both the Region and City.
- **Economic Benefits:** The Pit 3 Extension is anticipated to provide the following economic benefits:
 - **GDP:** production of the quarry is estimated to generate between \$16.6 million and \$29.9 million in direct, indirect and induced GDP within Ontario.
 - **Jobs:** PCQ will maintain the same number of operations (20) and driver (27) jobs as production is expected to be maintained. Estimated production of the quarry is anticipated to generate between 165 and 297 direct, indirect and induced jobs within the Ontario.
 - **Labour Income:** PCQ currently has a payroll of \$2 million for its operational employees and \$2.7 million for its drivers and mechanics. The estimated production of the quarry is anticipated to generate between \$11.3 million and \$20.4 million in direct, indirect and induced labour income in Ontario.
- **Capital Impact:** The existing and proposed quarry uses are not anticipated to have any impact on the Region's or City's capital programs. 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.
- **TOARC Levy:** Annual production of 1 million tonnes is expected to generate \$31,200 for the Region and \$126,880 for the City in TOARC fees. Based on the full excavation potential of the quarry, the Pit 3 Extension is estimated to generate \$1.4 million for the Region and \$5.7 million for the City in Aggregate Resources.
- **Conclusion:** It is anticipated that the proposed Pit 3 Extension will provide economic benefits to the Region and City and will have a net positive impact on the Region and City's finances. IBI Group anticipates that there will be minimal or no negative financial impacts on the Region/City's capital infrastructure programs.

1.2 Study Requirements

As per Policy 14.D.5 of the Region of Niagara Official Plan (ROP), the Region should consider the following criteria in its evaluation of proposed amendments to ROP:

- 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.”*

To address these evaluation criteria, regional planning staff provided a letter to IBI Group and PCQ dated April 9, 2020 which outlined the Terms of Reference for the FIA. As per the letter, the purpose of the assessment is:

- a) To demonstrate that the proposal will have a minimal negative financial impact on the Region or taxpayers from the cost of providing services such as road maintenance, long term monitoring and replacement water supplies among other matters.
- b) To demonstrate that extraction will occur in a manner that minimizes social, economic and environmental impacts.
- c) To demonstrate that there will be no public costs associated with the proposal throughout extraction, complete rehabilitation and any long term continuing mitigation and monitoring requirements, and to demonstrate that there will be adequate securities put in place, through an agreement or legislation, to ensure that the public and agencies will not be put at financial risk as a consequence of the approval.
- d) To demonstrate to what degree the proposal will create direct and indirect financial benefits or costs to the municipalities affected.
- e) To demonstrate what financial benefits to the community may be created as a consequence of the approval.

1.2.1 FIA Objectives

Further to the study purpose, the Region outlined the following objectives for the FIA:

1. To quantify the amount of assessment to be generated as a consequence of the approval of the application (compared to loss of existing use; i.e., farmland).
2. To identify what the economic impacts may be.
3. To estimate how much in license fees will be provided to the affected municipalities.
4. To determine what impacts the additional truck traffic will have on the cost of providing maintenance on affected roads.
5. To determine whether the proposal, if approved, will impact on the timing and/or need for road improvements to be paid for by the municipality.
6. To identify the financial benefits that may occur generally as a consequence of the approval (i.e., TOARC payments for road improvements).
7. To identify the potential cost of any long-term monitoring and mitigation on the site and the responsibility for that monitoring and the liability to any public authority or agency associated with that responsibility.

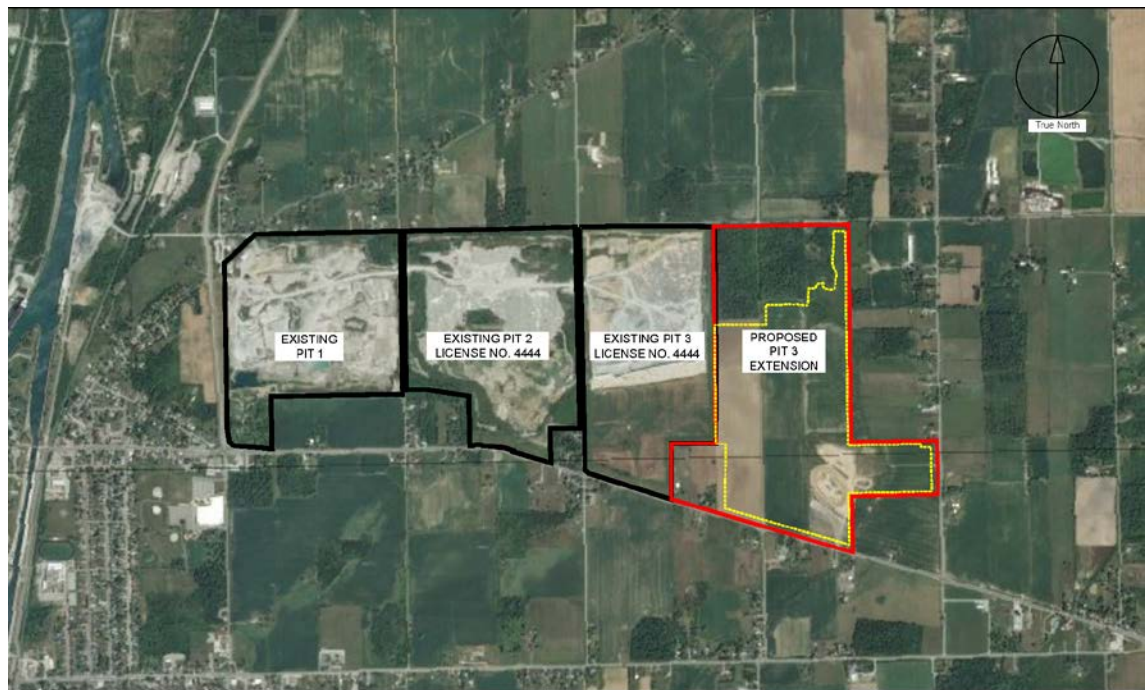
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1.3 Site Description

PCQ's proposed Pit 3 Extension (Extension Lands) is located on the north side of Highway 3, between PCQ's existing Pit 3 and Miller Road. PCQ's land holdings (outlined in red on Figure 1) are comprised of six parcels, which total 106.3 ha (262.7 acres). The total land to be licensed (outlined in yellow in Figure 1) is 80.3 ha (198.4 ac), 71.1 ha (175.7 ac.) of which is proposed as the extraction area.

Post-extraction, the Extension Lands will be rehabilitated to a lake. Further details on the rehabilitation and monitoring can be found in Section 4.1.4 of this report or the "Comprehensive Rehabilitation Strategy – Pit 1, Pit 2, Pit 3, Pit 3 Extension" report prepared by IBI Group and submitted as part of the overall planning application package.

FIGURE 1: SITE LOCATION



Source: IBI Group, 2021

2 Land Value Assessment Analysis

IBI Group conducted a land value assessment analysis to quantify the potential property tax revenues to be generated as a consequence of the approval of the application versus the existing uses. IBI Group has used 2021 Municipal Property Assessment Corporation (MPAC) assessment data as input to the analysis.

2.1 Analysis of Comparable/Estimation of Assessment Value

To understand the estimated assessment value of the Extension Lands as a quarry use, comparable quarry properties were identified throughout the City of Port Colborne, the Township of Wainfleet and Town of Fort Erie given their proximity to the Extension Lands and their grouping with the City of Port Colborne in the Ontario Aggregate Resource Corporation (TOARC) annual calculation of statistics. Based on the analysis of comparable properties, IBI Group estimates that the average assessment value per acre for a quarry use is \$7,450. It should be noted that the valuation of the Pit 1 lands were included to reflect the ultimate use of the Pit 3 lands with the processing plant and new entrance onto Highway 3.

FIGURE 2: COMPAREABLE ASSESSMENT (2021 VALUES FROM MPAC)

Quarry/Address	Location	PQR Pit #	Size (ac)	Assessment Value (\$)	Value/Acre (\$)
1170 Hwy 3	Port Colborne	3	79.9	\$415,000	\$5,200
1921 Babion Rd	Port Colborne	3	90.0	\$411,000	\$4,550
Concession 2 Rd	Port Colborne	2	180.8	\$1,204,000	\$6,650
Hwy 140	Port Colborne	1	163.0	\$2,136,000	\$13,106
Subtotal PQR Pits			513.7	\$4,166,000	--
License 4464	Wainfleet		340.8	\$2,370,000	\$6,950
License 607541	Wainfleet		76.8	\$538,000	\$7,000
License 4459	Fort Erie		621.2	\$3,258,000	\$5,250
License 11214	Fort Erie		32.3	\$356,000	\$11,000
Total			1,071.1	\$6,522,000	--
				Average	\$7,450

Note: Full property assessment value used. This could include residential, commercial, and industrial assessment values

Applying the estimated assessment value per acre to the proposed licensed area of the Extension Lands, it is estimated that the quarry use of the lands would have an assessed value of approximately \$1.3 million.

FIGURE 3: ESTIMATE OF EXTENSION LANDS ASSESSMENT VALUES (2021 VALUES)

Address	Size (ac)	Current Assessment Value	Quarry Value/Acre (\$)	Estimated Assessment Value (Quarry)
Miller Rd	25.0	\$112,000	\$7,450	\$186,300
1645 Con 2 Rd	50.4	\$357,000	\$7,450	\$375,500
1716 Hwy 3	26.2	\$655,000	\$7,450	\$195,100
Hwy 3	70.0	\$291,000	\$7,450	\$521,500
Total	171.6	\$1,415,000	\$7,450	\$1,278,300

Note: Numbers may not add due to rounding

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2.2 Estimate of Annual Municipal Property Tax Revenue

Annual municipal property tax revenues are based on the application of municipal tax rates against property assessment value. To quantify the estimated property tax revenues to be generated for the Extension Lands, IBI Group applied the 2021 Regional and City property tax rates to the existing and estimated 2021 assessment values¹. To align with MPAC’s realty tax class assessment value breakdown of comparable properties², IBI Group assumed an assessment value split of 57% Industrial/43% Residential for the projected quarry use.

IBI Group estimates that the quarry use could generate an annual property tax revenue of \$16,765 for the Region and \$22,920 for the City; an increase of \$6,665 and \$9,120 when compared to the property tax revenues of existing uses. Over the lifespan of the quarry (projected at 45 years), it is estimated that the quarry use could generate a total of \$754,425 for the Region and \$1.03 million for the City in property tax revenues; an increase of \$299,925 and \$410,400 when compared to the potential property tax revenues of existing uses (constant 2021\$ and current 2021 tax rates).

Though overall assessment value of the lands is expected to decrease in some instances, the increase in tax revenue via the industrial tax realty class is anticipated to offset the reduction. The proposed quarry use is expected to have a net positive financial benefit for the Region and City.

FIGURE 4: NIAGARA REGION ESTIMATED ANNUAL PROPERTY TAX REVENUE

Address	Size (ac)	Estimated Tax Revenue (Existing Assessment) 1)	Estimated Tax Revenue (Quarry Assessment) 2)	Difference
Miller Rd	25.0	\$190	\$2,440	\$2,250
1645 Con 2 Rd	50.4	\$1,690	\$4,925	\$3,235
1716 Hwy 3	26.2	\$7,725	\$2,560	-\$5,165
Hwy 3	70.0	\$495	\$6,840	\$6,345
Total (Annual)	171.6	\$10,100	\$16,765	\$6,665
Lifespan of Quarry (2021\$)		\$454,500	\$754,425	\$299,925

- Existing tax revenue based on assessment value by tax class as per MPAC 2021 Assessment Values (i.e. residential, commercial, industrial) and 2021 Regional and City tax rates. Values rounded to nearest 5.
- Values rounded to nearest 5.

FIGURE 5: PORT COLBORNE ESTIMATED ANNUAL PROPERTY TAX REVENUE

Address	Size (ac)	Estimated Tax Revenue (Existing Assessment) 1)	Estimated Tax Revenue (Quarry Assessment) 2)	Difference
Miller Rd	25.0	\$260	\$3,340	\$3,080
1645 Con 2 Rd	50.4	\$2,305	\$6,730	\$4,425
1716 Hwy 3	26.2	\$10,560	\$3,500	-\$7,060
Hwy 3	70.0	\$675	\$9,350	\$8,675
Total (Annual)	171.6	\$13,800	\$22,920	\$9,120
Lifespan of Quarry (2021\$)		\$621,000	\$1,031,400	\$410,400

- Existing tax revenue based on assessment value by tax class as per MPAC 2021 Assessment Values (i.e. residential, commercial, industrial) and 2021 Regional and City tax rates. Values rounded to nearest 5.
- Values rounded to nearest 5.

¹ Note: Assumption that all lands are taxable. It is not known how much land could be exempt as a “mineral and mineral land” use as per the Assessment Act.

² Based on PCQ Pit 1 and Quarry License 11214 in Fort Erie which most accurately represent the projected uses of the Extension Lands

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2.3 Reduced Assessment Value of Properties within 1km

Historically, MPAC provides assessment adjustments to residential properties abutting and within 1km of quarries. These adjustments are estimated at a downwards adjustment of 4% for lands abutting a quarry and 2% for properties within 1km of the use.

Understanding that various surrounding lands would already have been adjusted due to the presence of the existing PCQ quarries, IBI Group identified new residential properties within 1km of the Extension Lands which would be impacted by this assessment value adjustment. In total, 68 properties were identified.

As shown in Figure 6, the downwards adjustment to the new properties surrounding the Extension Lands is expected to reduce the City's tax revenue by \$4,830 and the Region's tax revenue by \$3,583 respectively.

FIGURE 6: NEW PROPERTIES WITHIN 1KM OF SITE – REDUCTION IN PROPERTY TAX REVENUE

	Port Colborne			Region of Niagara		
	Estimated 2021 Tax Revenue	Estimate 2021 Tax Revenue (reduced)	Difference	Estimated 2021 Tax Revenue	Estimate 2021 Tax Revenue (reduced)	Difference
New lands within 1km	\$243,002	\$238,171	-\$4,830	\$179,286	\$175,704	-\$3,583

2.4 Net Tax Revenue Position

When comparing the increase in anticipated tax revenue from the quarry use against the expected decrease in tax revenue from the downwards adjustment to surrounding properties, the development of the Extension Lands is anticipated to remain positive, generating a net positive tax revenue position of \$4,290/annum for the City and \$3,082/annum for the Region.

FIGURE 7: NET TAX REVENUE POSITION – EXTENSION LANDS

	City	Region
Increase in Tax Revenue from Quarry Use	\$9,120	\$6,665
Less: Decrease from properties in 1km	-\$4,830	-\$3,583
Surplus/Deficit (per annum)	\$4,290	\$3,082

3 Economic Benefits

3.1 Aggregate Production & the Environment

From the 2018 TOARC Annual Statistics report, it is estimated that Ontario produces 161 million tonnes of aggregate per year. Of the provincial total, Niagara Region accounts for approximately 3% (5.2 million metric tonnes) of all production, which ranks as the 10th largest producing regional municipality in the Province. Within Niagara Region, Fort Erie, Pelham, Port Colborne, and Wainfleet are responsible for 53% (2.8 million metric tonnes³) of the Region's total aggregate production.

Based on the past three years of data, the following breakdown represents the distribution of products to the aggregate market from PCQ's existing operations:

- Government (Municipal, City, Region, M.T.O) – 78%
- Private / Farming – 18%
- Water born (Domestic and International) – 4%

As per PCQ, the maximum annual production volume for the Pit 3 Extension will be 1.0 million tonnes/annum. PCQ anticipates to operate at or near that level for the foreseeable future.

Aggregate resources are a critical component of the transportation and construction industries, which rely on locally sourced aggregate for competitive prices and a reduction in environmental impacts. On average, it is estimated that 14 tonnes of stone, sand and gravel are used every year per capita to build homes, infrastructure and community uses³. Maintaining local access to aggregate, especially within close proximity to the GTHA, would help to meet increasing resource demands and would assist in reducing transportation and greenhouse gas emissions. From the Ontario Stone Sand and Gravel Association (OSSGA), "if every load of aggregate used in Ontario had to travel just one extra kilometre to reach its destination job site, an extra 2.5 million litres of fossil fuel would be consumed annually, and annual greenhouse gas emissions would increase by nearly 7,000 tonnes"³.

3.2 Input-Output Multiplier Calculation

To quantify the potential economic impact of the Extension Lands, IBI Group used the multiplier approach as per the Statistics Canada Input-Output Modelling (I/O). IBI Group identified employment, GDP and labour income impacts as a result of the expenditures related to the quarry operations. Direct, indirect and induced economic impacts have been accounted for.

Due to the competitive nature of the industry, IBI Group has calculated the economic benefit estimates based on a range of production values for comparable \$/tonne values. On this basis, the multiplier analysis assumes production values of \$16.15 to \$29.10 million per year, which is based PCQ's expected production of 1 million tonnes.

3.3 Economy

The OSSGA estimates that Ontario's aggregate industry contributes an estimated \$1.6 billion of GDP toward the provincial economy⁴ and nearly \$20 million in annual license fees to the Province and municipalities. Based on the range of production for the Extension Lands, it is estimated that that quarry operations could generate between \$9.08-\$16.35 million in direct and

³ Source: Aggregate Resources Statistics in Ontario, Production Statistics 2018 – The Ontario Aggregate Resources Corporation (TOARC)

⁴ Source: Aggregate Builds Ontario (2015) – Ontario Stone, Sand & Gravel Association (OSSGA)

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\$7.54-\$13.59 million in indirect and induced GDP within Ontario. A total of \$16.62 to \$29.94 million/annum in GDP could be expected from the production at the Extension Lands.

3.4 Jobs

The nature of the proposed expansion is to allow for the continuation of the quarries existing operations. As such, the proposed Pit 3 extension is expected to maintain the 20 jobs currently associated with the PCQ operations. An additional 27 full time trucking jobs and six full time mechanic jobs will also be maintained. PCQ estimates that another 3.5 years of work for other trades at the quarry will be generated based on the expected level of production⁵.

From the multiplier analysis, it is estimated that that quarry operations could generate between 98-176 direct jobs and 68-122 indirect and induced jobs within Ontario. A total of 165-297 jobs could be generated based on the production at the Extension Lands.

3.5 Labour Income

As per PCQ, the payroll for the 20 operations jobs is \$2 million per year and the payroll for the labour for the truckers, mechanics and service men totals an additional \$2.5 million. Using the multiplier analysis, annual production of the Extension Lands is estimated to generate between \$7.41-\$13.36 million in direct and \$3.92-\$7.07 million in indirect and induced labour income within Ontario. A total of \$11.33-\$20.43 million is estimated to be generated in labour income from quarry use of the Extension Lands.

FIGURE 8: INPUT-OUTPUT MULTIPLIER CALCULATION

Total Estimated Production (Low)	\$16,150,000	
Economic Impact from Capital Expenditures - Construction		
	Ontario	Canada
GDP Impact (Basic Price)		
Direct	\$9,076,300	\$9,076,300
Indirect and Induced	\$7,542,050	\$9,641,550
Total	\$16,618,350	\$18,717,850
Jobs (Person-Years of Employment)		
Direct	98	98
Indirect and Induced	68	83
Total	165	181
Labour Income		
Direct	\$7,412,850	\$7,412,850
Indirect and Induced	\$3,924,450	\$4,909,600
Total	\$11,337,300	\$12,322,450

⁵ Information provided by Port Colborne Quarries Inc.

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Total Estimated Production (High)	\$29,100,000
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Economic Impact from Capital Expenditures - Engineering		
	Ontario	Canada
GDP Impact (Basic Price)		
Direct	\$16,354,200	\$16,354,200
Indirect and Induced	\$13,589,700	\$17,372,700
Total	\$29,943,900	\$33,726,900
Employment Impact (Person-Years of Employment)		
Direct	176	176
Indirect and Induced	122	150
Total	297	326
Labour Income		
Direct	\$13,356,900	\$13,356,900
Indirect and Induced	\$7,071,300	\$8,846,400
Total	\$20,428,200	\$22,203,300

4 Capital Impact Analysis

IBI Group assessed PCQ's current and proposed quarry operations to ascertain any current or future impacts to the Region or City's capital infrastructure programs. If required, IBI Group has identified mitigative measures to minimize any potential adverse impacts.

4.1 Review of Quarry Operations

The following provides a breakdown of the current and proposed extractive operations of the quarry to highlight the extent to which the Regional and local municipal services and infrastructure may be used. Specifically, this section will provide an overview of:

- a) The existing quarry operations;
- b) The initial start-up and first years of operation of the proposed Pit 3 Extension;
- c) The long term operations of the proposed Pit 3 Extension; and,
- d) The proposed long term monitoring and mitigation measures for the Pit 3 Extension.

4.1.1 Existing Quarry Operations

PCQ began operations of the abutting Pit 2 (fully extracted) and Pit 3 (partially extracted) lands in 1981 and 2001 respectively. The following provides details on the existing quarry operations and their potential impacts on Regional and City services and infrastructure:

- Excavated materials from Pit 2 and Pit 3 are transported to Pit 1 for processing and are required to cross two City roads (Babion Road and Snider Road) in the process. Although Babion Road and Snider Road have very little public use, stop signs are present at the exit of each pit to require all quarry trucks to come to a full stop before crossing. All necessary upgrades to Babion Road and Snider Road to facilitate the crossing traffic have been assumed by PCQ.
- PCQ has long been aware of persistent illegal dumping along Babion Road and at the dead-end of Sniders Road, and blockages in some of the ditches and surface water course that cross Babion Road. It has been an on-going practice of PCQ to send their staff out to pick up the garbage and clear the blockages at their own expense.
- Once the aggregate is processed within Pit 1, materials are distributed to the greater market by truck (via Ramey Road, Second Concession Road, and Highway 140) or by water (via Ramey Road and Second Concession Road to the Welland Canal). On average, the quarry operations generate 15.4 truck trips per hour. PCQ provides dust mitigation through the frequent application of water along all routes.
- Water from on-site wells are used to wash the aggregate as part of the processing operations. PCQ has a valid Permit to Take Water (PTTW) issued by the Ministry of Environment Conservation and Parks (MECP) and is considered a 'user' of water since the vast majority (93%-95%) of the water is recycled back to the source.

Therefore, to best of our knowledge, the existing PCQ operations are not anticipated to have any negative financial impacts on the Region and City's capital infrastructure programs. PCQ has assumed all costs for the necessary upgrades to the road crossings at Babion Road and Snider Road and the quarry operations do not use any Regional water or wastewater infrastructure.

4.1.2 Pit 3 Extension Start-up and First Years of Operation

As part of the pre-licensing process, PCQ has entered into discussions with the Region, the City and the Ministry of Transportation (MTO) to determine the implementing details of the following capital upgrades for the Pit 3 Extension:

- A new entrance/exit for the Pit 3 Extension will be required onto Highway 3 (Provincial road). Any costs incurred for the new access and any associated road upgrades will be the responsibility of PCQ.
- PCQ has purchased Carl Road (City road) between Highway 3 and Second Concession Road. Any costs incurred for surveys and legal costs associated with the purchase will be the responsibility of PCQ.

Based on the above, IBI Group does not anticipate that there will be any financial impacts for the Region or City for any pre-licensing infrastructure requirements.

Subject to the approval of the Pit 3 Extension licensing application, numerous start-up actions, at the expense of PCQ, will occur and include:

- Repair and/or new construction of perimeter fencing;
- Limited stripping of topsoil/subsoil and the construction of perimeter berms;
- Installation of any additional site monitoring stations;
- Installation of a dewatering pump, which will be located at southeast corner of Pit 3. The dewatering pump will be powered by a high-efficient diesel generator.

The operations of the Pit 3 Extension will follow the plan of operations for the existing pits for the first several years. All extracted material from the Pit 3 Extension lands will be trucked to the existing processing area within Pit 1 as noted in Section 4.1.1.

It is not anticipated that there will be any financial impact for the Region or City's capital infrastructure programs through the start-up or first several years of operation of the Pit 3 Extension. PCQ is committed to funding all necessary capital upgrades for the new entrance/exit and for any costs associated with the purchase of Carl Road.

4.1.3 Pit 3 Extension Long Term

After several years of operating the Pit 3 Extension under existing operating procedures, PCQ intends to relocate the processing facility from Pit 1 to the northern portion of Pit 3. The relocation and/or the introduction of new processing components in Pit 3 will necessitate both significant effort and financial expenditure (+/- \$10.5M). For this to occur, PCQ will undertake the following capital upgrades:

- Extend Phase 3 power through the middle of the site via the Pit 2 and Pit 3 lands to access the proposed processing area (sole responsibility of PCQ).
- Request a new PTTW from MECP to extract water from an existing well within Pit 3 or to drill a new well to supply water for the relocated wash plant.
- Design and construct the new Pit 3 Extension entrance/exit onto Highway 3. As part of the entrance design process, a geotechnical assessment may be requested to ascertain the capability of Highway 3 to withstand the increased use from the quarry trucks. Any required upgrades would be limited to the portion of road from the proposed quarry entrance onto Highway 3 and would be at PCQ's cost. The road upgrades would be built to meet the long-term needs of the road so they coincide with the lifespan of the quarry to avoid future maintenance issues. PCQ will enter into an agreement with Region/Province for any future works.

- Upon the relocation of the processing plant to the Pit 3 and the commissioning of the new entrance/exit onto Highway 3 or Miller Road, the existing entrance from Pit 1 onto Ramey Road will be closed.

It is not anticipated that there will be any Region or City financial impacts for any infrastructure improvements as part of the long term operation of the Pit 3 Extension. If it is determined through further study that upgrades are required, PCQ will enter into an agreement with the Region/City to cover the capital costs and determine the timing for reconstruction. Any replacement water supply costs to neighbouring properties resulting from quarry operations will be paid for by PCQ.

4.1.4 Long Term Mitigation and Monitoring Measures

The existing Pit 3 quarry has extensive surface and groundwater monitoring that has been on-going for decades. This is required due to the dewatering of the quarry and the requirements for pre-detection of groundwater interference on the supply and/or quality of local domestic wells. The Region and City have not been involved with any monitoring or mitigation to date and PCQ does not anticipate that they will be required for any future monitoring measures. The annual reports related to the monitoring are made available to MNR and MECP.

As identified in the Comprehensive Rehabilitation Strategy, Pit 3 Extension lands will begin to fill with water and ultimately become a lake that totals 65 hectares with a varying depth of 8.0 metres to 16.0 metres. Although the Aggregate Resources Act (ARA) stipulates that the maximum steepness of the side slopes is a 2 (horizontal) to 1 (vertical) slope, PCQ is proposing to create variable side slopes that will range from 2:1 to 3:1 and 4:1 thereby creating portions of the site where the side slopes are much more shallow.

In addition to the above, and with the quarry moving toward new adjoining sensitive land uses, additional monitoring and mitigative measures will be necessary for blasting, noise and dust. Upon final extraction of the site, it is anticipated that the remaining rehabilitation will be minor and PCQ will contact MNR to inspect the site and request full surrender of the licence.

Based on this approach, requiring monitoring beyond the final extraction period is seldom required. It may be necessary that some final vegetation may require further monitoring for an extended period of a few years to ensure that if there is any isolated erosion/gully or vegetation die-out, that it is addressed, repaired and replaced as necessary.

As with the existing quarry operation, all costs incurred to undertake the mitigative measures will continue to be the responsibility of PCQ. The necessary securities will be paid as per the requirements of the ARA.

4.2 Road Traffic – Impacts on Maintenance and Timing

The current Niagara Region and City of Port Colborne Development Charges Background Studies (DCBS) do not identify any Regional or City road upgrades for any of the existing or proposed haul routes for the Pit 3 Extension. Additionally, no Regional road capital upgrades were identified in the Region’s Transportation Master Plan to 2041. Therefore, the timing and cost recovery for any identified road upgrades would be the responsibility of PCQ and would need to be agreed upon with the Region, City or MTO.

The Pit 3 Extension will not be generating any new aggregate related truck traffic as the total licensed volume will maintain existing excavation and transport levels. Based on the long term operations of the Pit 3 Extension, the principal changes which would affect Regional or City road infrastructure are the new entrance/exit on to Highway 3 and the short haul route to access Highway 140. If it is determined through further study that upgrades are required, PCQ has indicated that the new road infrastructure would be built to meet the long-term needs of the road

Prepared for Port Colborne Quarries Inc.

so they coincide with the lifespan of the quarry to avoid future maintenance issues. The use of Ramey Road and Second Concession Road will cease once the new haul routes are in use.

As outlined in Section 4.1, PCQ is committed to funding the design and construction of any road upgrades which are required to accommodate the new entrance/exit to the Pit 3 Extension and the new haul route to access Highway 140. PCQ will enter into agreements with the necessary agencies to ensure that all road design guidelines are adhered to and that the timing for any required upgrades is agreed upon. If road upgrades are not required at this time, PCQ will enter into an agreement with the appropriate agency to pay for the cost of the required upgrades at a future date while the quarry remains operational.

4.3 Wignell Drain Re-alignment

The City of Port Colborne has initiated a realignment of the Wignell Drain (under the Drainage Act) from north of the site, (north of Second Concession Road) and along the rear yards of the homes that front onto Miller Road. That portion of the realignment will be charged back to (assessed to) all the impacted land owners as calculated by/determined by the Township's Drainage Engineer. PCQ will pay their required proportion based on their 'land drainage contribution' portion as determined by the Drainage Engineer.

Where the Wignell Drain bisects the 'eastern leg', PCQ Inc. will be fully responsible for all the cost of a temporary relocation of that part of the Wignell Drain, (i.e. towards Miler Road), and then after the quarry stone is extracted there, to backfill much of the 'eastern leg' so they can in-turn replicate the Wignell Drain back to its original location and elevation.

4.4 Summary - Capital Impact Assessment

The Pit 3 Extension is not anticipated to generate any financial capital impacts for the Region or City for the following reasons:

- The existing operations and proposed Pit 3 Extension do not/will not use any water or wastewater infrastructure from the Region of City.
- No road upgrades for existing or proposed haul routes are identified in the Regional or City DCBS' or associated transportation master plans.
- All costs associated with upgrades for the Pit 3 Extension, including the new entrance/exit onto Highway 3, any road upgrades required for the new haul route, and any necessary intersection upgrades will be the responsibility of PCQ. PCQ will enter into agreements with the necessary agencies to ensure that all road design guidelines are adhered to and that the timing for any required upgrades is agreed upon.
- If road upgrades are not required at this time, PCQ will enter into an agreement with the Region/City whereas PCQ would be responsible to pay for the cost of required upgrades at a future date while the quarry remains operational.
- All costs associated with the realignment of the East Wignell Drain will be the responsibility of PCQ.

5 TOARC Fees

5.1 Aggregate Resources Act (ARA) Aggregate Levy

Through TOARC, PCQ pays a per tonne aggregate levy to both the Region and the City. The 2021 levy is 20.8¢ per tonne, with 3.1¢ /tonne going to the Region and 12.7¢ going to the City. The remainder of the fee is split between the Crown and an Aggregate Resource Trust.

Based on the annual production of 1.0 million tonnes, a levy of \$31,200 would be paid to the Region and \$126,880 would be paid to the City of Port Colborne. Using the 2021 rate, the full extraction of the Pit 3 extension could generate \$1.4 million for the Region and \$5.7 million for the City in TOARC fees.

FIGURE 9: ESTIMATED TOARC REVENUES AT FULL EXCAVATION (2020 RATES)

	2021 Levy (\$/tonne)	Annual Extraction Amount	Estimated Annual TOARC Fee (2021 Rate)	Full Extraction Amount (years)	Full Excavation - Estimated Levy (2021 rates)
Region of Niagara	0.031	1,000,000	\$31,200	45	\$1,404,000
City of Port Colborne	0.127	1,000,000	\$126,880	45	\$5,709,600
Aggregate Resource Trust	0.006	1,000,000	\$6,240	45	\$280,800
Crown Levy	0.044	1,000,000	\$43,680	45	\$1,965,600
Total Levy	0.208	1,000,000	\$208,000	45	\$8,320,000

Source: <https://www.ontario.ca/page/aggregate-resources>

The current levy is reassessed each January by the Province and revised upward to account for inflation. Therefore, over the lifespan of the quarry, the annual ARA Levy contributions are anticipated to be greater than the levies calculated above.

6 Summary and Conclusion

Based on IBI Group's analysis, the following summarizes the findings of this report:

- **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. Using the Region's and City's 2021 tax rates, the quarry use would generate \$16,765 for the Region and \$22,920 for the City in annual property tax revenues; an increase of \$6,665 and \$9,120 when compared to the existing use revenues. When factoring the downward adjustment for residential uses within 1km of the site, the quarry use of the Extension Lands still results in a net positive tax revenue for both the Region and City.
- **Economic Benefits:** The Pit 3 Extension is anticipated to provide the following economic benefits:
 - **GDP:** production of the quarry is estimated to generate between \$16.6 million and \$29.9 million in direct, indirect and induced GDP within Ontario.
 - **Jobs:** PCQ will maintain the same number of operations (20) and driver (27) jobs as production is expected to be maintained. Estimated production of the quarry is anticipated to generate between 165 and 297 direct, indirect and induced jobs within the Ontario.
 - **Labour Income:** PCQ current has a payroll of \$2 million for its operational employees and \$2.7 million for its drivers and mechanics. The estimated production of the quarry is anticipated to generate between \$11.3 million and \$20.4 million in direct, indirect and induced labour income in Ontario.
- **Capital Impact:** The existing and proposed quarry uses are not anticipated to have any impact on the Region's or City's capital programs. 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.
- **TOARC Levy:** Annual production of 1 million tonnes is expected to generate \$31,200 for the Region and \$126,880 for the City in TOARC fees. Based on the full excavation potential of the quarry, the Pit 3 Extension is estimated to generate \$1.4 million for the Region and \$5.7 million for the City in Aggregate Resources.

Based on the above summary, it is anticipated that the proposed Pit 3 Extension will provide economic benefits to the Region and City and will have a net positive impact on the Region and City's finances. IBI Group anticipates that there will be minimal or no negative financial impacts on the Region/City's capital infrastructure programs.