



Final

# Comprehensive Rehabilitation Strategy

## Pit 1, Pit 2, Pit 3, Pit 3 Extension

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Prepared for Port Colborne Quarries Inc.  
by IBI Group  
October 30, 2020

# Document Control Page

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# 1 Introduction

Port Colborne Quarries Inc. (PCQ) is making application for an expansion to their existing network of licensed and non-licensed sites within the City of Port Colborne. Currently, their network spans the majority of three rural lots, totaling approximately about 209 hectares of which 142.1 hectares are licensed under the Aggregate Resources Act. The pending application will extend this network over most of another rural lot and add another 106.3 hectares sited between Highway 140, Highway 3 (Main Street), Regional Road 84 (Miller Road) and Second Concession Road.

Integral to the direction of the province, the Region of Niagara and the City of Port Colborne is that where multiple extraction sites occur that an overall 'comprehensive rehabilitation plan' should be developed. This report summarizes the status of the existing extraction sites, reviews the ongoing progressive rehabilitation efforts and examines the final rehabilitation options. As well, the report provides a vision for a long-term comprehensive rehabilitation strategy of all the PCQ land holdings.

## 2 Policy Framework for Comprehensive Rehabilitation

As noted above, numerous levels of government have specific policies that require aggregate applicants to consider rehabilitation not just in a 'site by site' manner, but to have a larger view, taking into consideration the regional landscape. These policies include:

### 2.1 Provincial Policy Statement 2020

Within the Provincial Policy Statement (PPS), Policy 2.5.3.2 states the following:

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

In the context of the PPS, 'comprehensive rehabilitation' is defined as "rehabilitation of land from which *mineral aggregate resources* have been extracted that is coordinated and complementary, to the extent possible, with the rehabilitation of other sites in an area where there is a high concentration of *mineral aggregate operations*."

### 2.2 Niagara Region – Regional Official Plan (ROP)

The Niagara Region Official Plan also provides guidance regarding rehabilitation and specifically as follows:

#### Policy 6.C.8

*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.*

#### Policy 6.C.9

Where two extractive operations are separated by a Regional road, the feasibility of allowing the producers to temporarily re-route and then replace the road at a lower

elevation will be considered to enable operators to remove viable material between the operations.

## 2.3 City of Port Colborne – Official Plan (OP)

The City of Port Colborne Official Plan provides the following policies regarding rehabilitation:

### Policy 10.2.1

- j) Progressive Rehabilitation Master Plan which will show how the rehabilitation will be completed sequentially within a reasonable time and in accordance with the *Aggregate Resources Act*, and any other regulations or applicable plans;

### Policy 10.2.2

- 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.
- 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.
- f) Where such resources exist, the City will promote and encourage rehabilitation of *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.

## 3 Existing Extraction Sites

PCQ operates several existing quarry sites within the area bounded by Highway 140, Highway 3 (Main St.), Miller Road and Second Concession Road. Some of these sites are active but not licensed and therefore do not have an established rehabilitation plan, and other sites are licensed under the *Aggregate Resources Act* which are both active and non-active extraction areas. The following provides a description of these sites and their individual final rehabilitation design.

Figure 1 highlights the regional context of the PCQ lands and the extent of the historical extraction over the past +65 years.

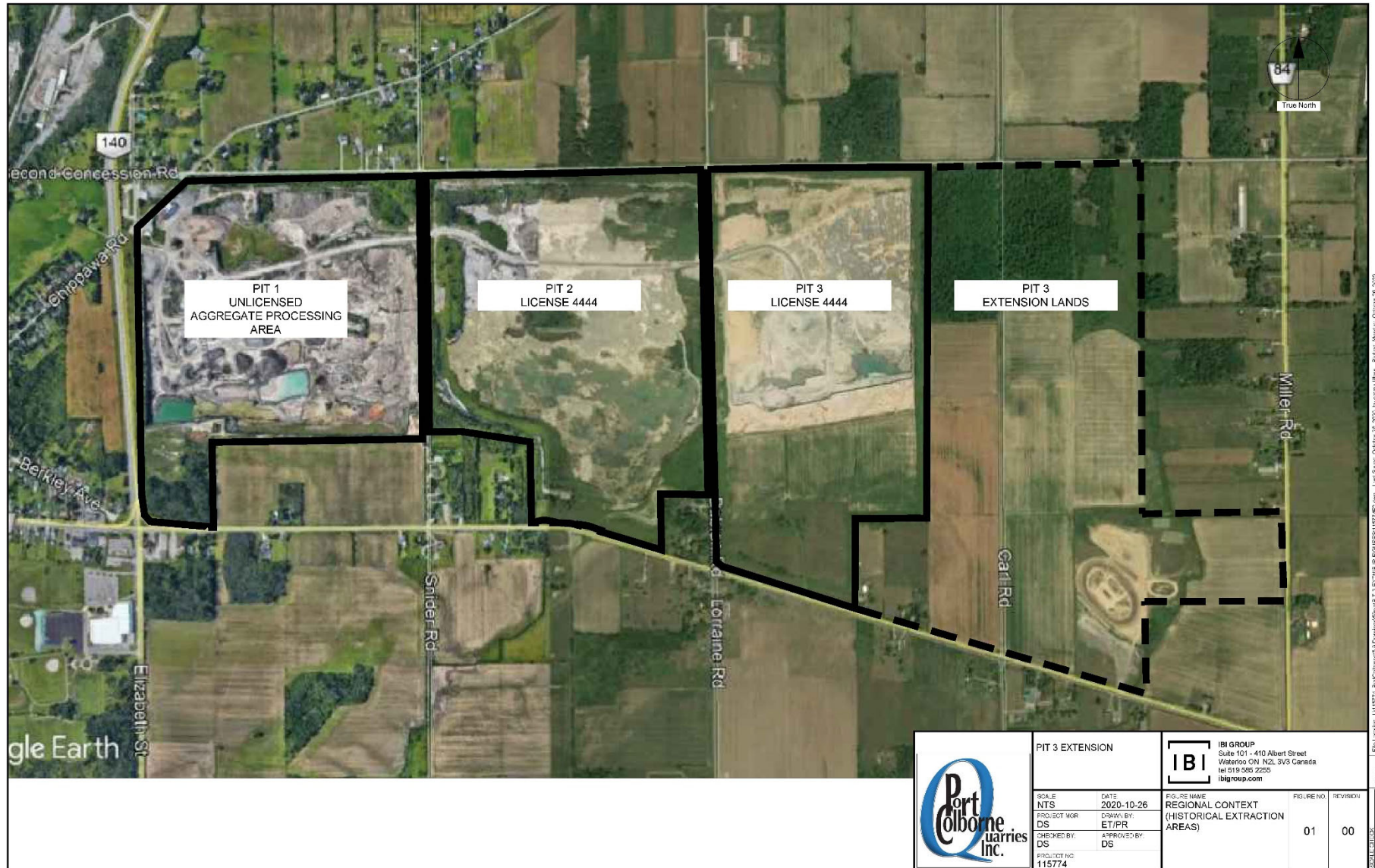
### 3.1 Pit 1



Pit 1 lands are located adjacent to Highway 140. 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).

COMPREHENSIVE REHABILITATION STRATEGY  
 PIT 1, PIT 2, PIT 3, PIT 3 EXTENSION

Prepared for Port Colborne Quarries Inc.

Figure 1 Regional Context (Historical Extraction Areas)



	PIT 3 EXTENSION		 IBI GROUP Suite 101 - 410 Albert Street Waterloo ON, N2L 3V3 Canada Tel 519 585 2255 ibigroup.com	FIGURE NO.	REVISION
	SCALE: NTS PROJECT MGR: DS CHECKED BY: DS PROJECT NO: 115774	DATE: 2020-10-26 DRAWN BY: ET/PR APPROVED BY: DS		FIGURE NAME: REGIONAL CONTEXT (HISTORICAL EXTRACTION AREAS)	01

According to PCQ staff, quarrying initially began on the subject lands sometime between 1954 and 1955 under the ownership of the Grey Nuns. Shortly thereafter, the lands were purchased by Canada Steamship Lines and under their ownership, the level of quarrying activity escalated. It is believed that during the peak production years, the quarry had as many as 60 employees with an annual production in the range of 2 million tonnes. By 1971 when the provincial Pits and Quarries Control Act (P&QCA) came into effect, the site was completely exhausted of its' aggregate reserves and consequently, the site did not get licensed under the aforementioned Act. As such, the Pit 1 reserves were fully extracted in a span 16 years.

An easement in favour of Ontario Hydro traverses the property in a north/south direction including two large towers/pylons which are associated with the hydro line. In the southwest corner of the site is a 5.27 hectare parcel of land that represents a jog in the property boundary. These lands are outside the limits of the former quarry but form part of the overall PCQ land holdings. These lands are undisturbed and are occupied by a grove of trees.

Although fully extracted, these lands continue to be a critical component of the ongoing PCQ operation as currently, aggregate from the PCQ Pit 3 lands are extracted and hauled through Pit 2 into Pit 1 for processing and shipping. The aggregate processing includes crushing, screening, blending and a wash plant including a series of wash ponds located along the site's southern boundary. In addition, dispersed throughout the central portion of the quarry floor are product stockpiles of processed material which, on an on-going basis, are loaded by front-end loaders into awaiting haul trucks. Accessory uses include an office, a scale house and other associated out-buildings.

Since Pit 1 was excavated below the groundwater level, dewatering occurred by lowering the natural groundwater during active extraction so that the site was kept dry by discharged the water off-site. In order to facilitate the ongoing processing operation located on the Pit 1 quarry floor, and to keep the site dry, the dewatering pumps continue to operate.

The current zoning of the lands are as follows:

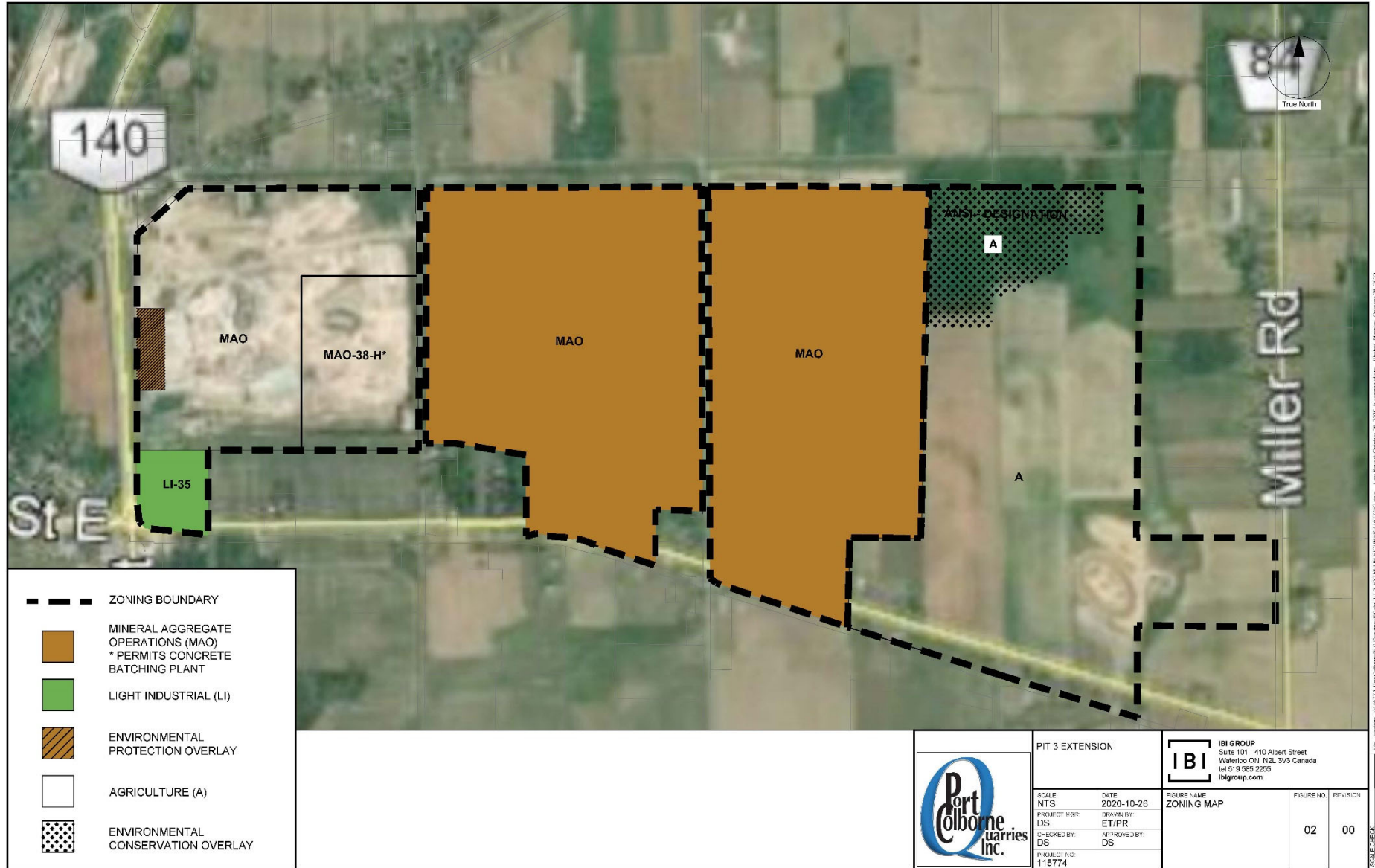
- MAO Mineral Aggregate Operations
- MAO-38-H Mineral Aggregate Operations permitting concrete manufacturing plant subject to a (H) provision requiring a Site Plan Agreement
- L1-35 Light Industrial permitting a Hotel
- Environmental Protection (pertaining to an identified ANSI - geological formation)

Figure 2 illustrates the zoning provisions for Pit 1. Based on the current site zoning, the active aggregate processing operation properly zoned. In addition, within the area noted, PCQ is also permitted to operate a concrete manufacturing plant, and light industrial uses (including a hotel) at the southern portion of the site.

The reference to the Environmental Protection Area that parallels a portion of the Highway 140 frontage corresponds with an area designated by the Ministry of Natural Resources and Forestry (MNR) as an Area of Natural or Scientific Interest (ANSI) of the Earth Science category based on a local geological formation. The significance of this ANSI lies in the fact that it is a representative sequence of the Bertie Formation with a major disconformity. The *Earth Science Inventory Checklist* associated with this ANSI dated July 1980, does not indicate the limits/size of the ANSI. Most recent dialogue with MNR, (winter 2020) specified that on-going protection of the ANSI will require the permanent exposure of the of this portion of the quarry face.

Prepared for Port Colborne Quarries Inc.

Figure 2 Zoning Map





Because the subject lands were never licensed under either the Pits and Quarries Control Act or the Aggregate Resources Act, Pit 1 does not have any stipulated progressive and/or final rehabilitation requirements.

The City of Port Colborne has identified a 1982 Site Plan Agreement dealing with the Pit 2 and Pit 3 lands and it does make mention of the subject lands in Clause 23 and Clause 14 is included for context as follows:

Clause 14:

*[PCQ] has as a condition of licensing pursuant to the P&QCA, agreed to undertake and maintain a rehabilitation program comprising a passive recreational lake which would only be used by sail boats, canoes and row boats. [PCQ], however, reserve the right to change the type of rehabilitation program subject to concurrence by both the Ministry of Natural Resources and the City of Port Colborne and the resultant amending of this Agreement.*

Clause 23:

*[PCQ] agrees to the undertaking and maintenance of a rehabilitation program compatible to the program contemplated in Clause 14 of this Agreement for that area west of Snider Road, being Part of Lots 23 and 24 Concession 2.*

Notwithstanding this Site Plan Agreement, as part of a Site Alteration Permit application in July 2028, IBI Group provided the following professional planning opinion to the city regarding these clauses:

Clause 23 is requesting that the final land use of Pit 1 be compatible to the final land use of Pits 2 and 3, and the final land use of Pit 2 and 3 (as being described in Clause 14), is proposed to be a passive recreational lake. Of note:

- It is acknowledged that the final land use of Pit 2 and 3 is for a passive recreational lake, (as proposed by the existing ARA approved Site Plans).
- Clause 23 requests that the final land use of Pit 1 should be compatible to the final land use of Pits 2 and 3.

It was our position that compatible is not defined as meaning the same or identical, but rather development that can co-exist in harmony with the surrounding area or co-exist without causing undue adverse impacts on the surrounding properties.

The above noted Site Alteration Permit was to initiate a clean fill program that will allow the Pit 1 to be backfilled back to its' pre-extraction grades in order to accommodate the development of a mixed-use industrial development. Planning for a proposed industrial development was intended to occur in conjunction with the clean fill program and as such, a future Zone Change Application will be required to permit the final land use.

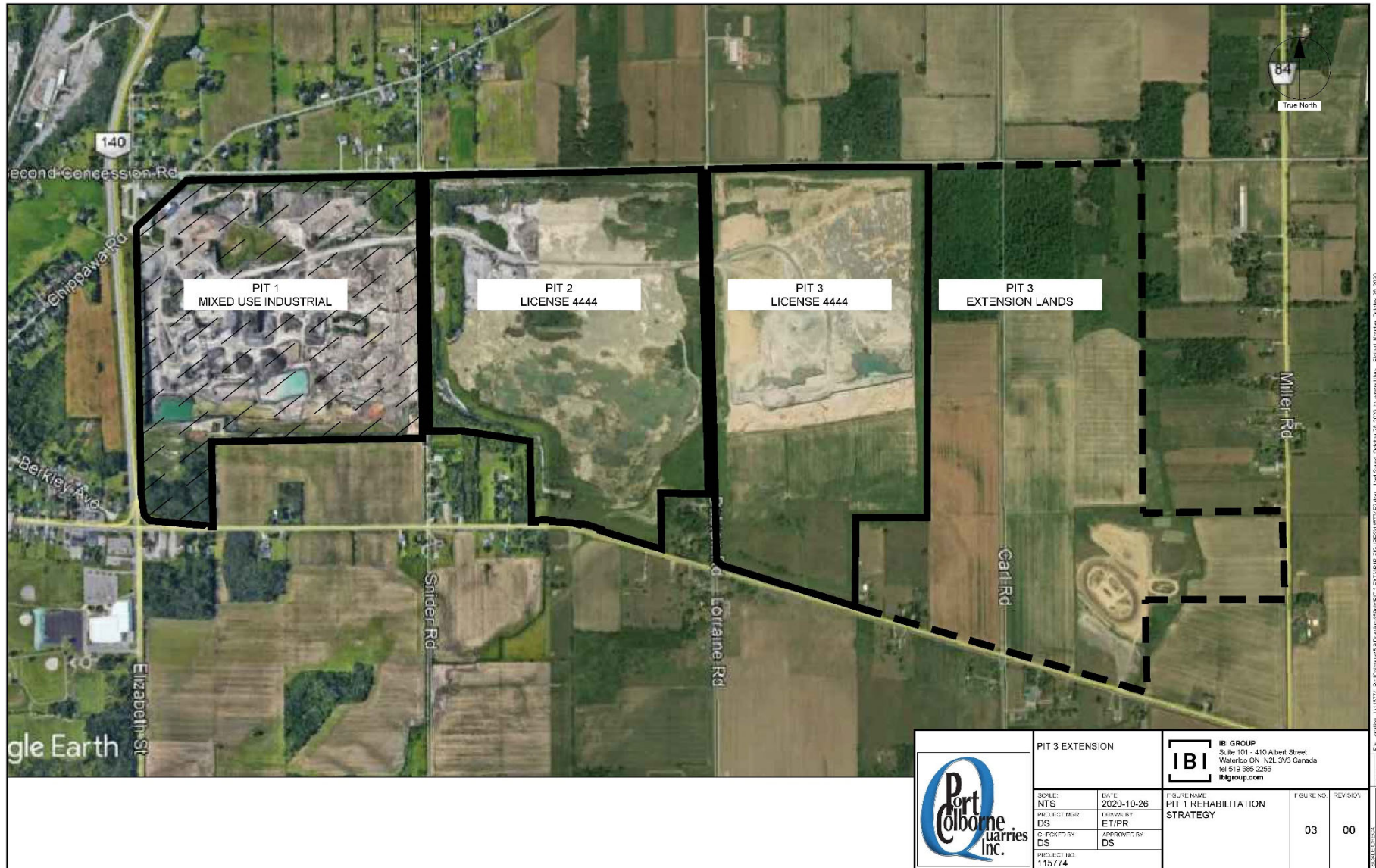
The subject site is well-suited as a mixed-use industrial development as it is within the Region's delineated urban area as identified on Schedule A of the Regional Official Plan and shown as "Industrial" on the City of Port Colborne Official Plan - Schedule A.

The site occupies a prominent location at the intersection of Regional Road 140 and Highway 3, which are key transportation corridors within Port Colborne and the southern Ontario region at large. It is in close proximity to the Welland Canal allowing for additional access and connectivity. Thus in terms of location, the site enjoys direct access to major transportation corridors, while being buffered from existing sensitive uses; making it well-suited for future industrial/employment, yet one which is compatible use with a passive recreational lake to the east.

COMPREHENSIVE REHABILITATION STRATEGY  
PIT 1, PIT 2, PIT 3, PIT 3 EXTENSION

Prepared for Port Colborne Quarries Inc.

Figure 3 Pit 1 Rehabilitation Strategy



	PIT 3 EXTENSION		IBI GROUP Suite 101 - 410 Albert Street Waterloo ON N2L 3V3 Canada tel 519 586 2255 ibigroup.com	FIGURE NAME PIT 1 REHABILITATION STRATEGY	FIGURE NO. 03	REV. NO. 00
	SCALE: NTS	DATE: 2020-10-26				
	PROJECT MGR: DS	DRAWN BY: ET/PR				
	CHECKED BY: DS	APPROVED BY: DS				
PROJECT NO: 115774						

Therefore, the intent of PCQ is that Pit 1 be returned to its' original pre-extraction grade and ultimately be re-zoned for a mixed-use industrial development. To facilitate this, PCQ have met with Regional and City staff (January 21, 2019) to discuss PCQ's providing financial support for a Secondary Plan for these lands to be undertaken by a third party consulting firm under the supervision and leadership of the Region.

In summary, it remains the position of PCQ that the Pit 1 lands be converted to an industrial land use.

## 3.2 Pit 2

Pit 2 is located immediately east of Pit 1 and specifically between Snider Road (unopened) and Babion Road and totals 73.1 hectares. Pit 2 is licensed under the Aggregate Resources Act as Licence # 4444. Extraction of the site is all but complete. PCQ are aware of approximately 1 MT of reserve remaining within the north-east portion of the site but its' retrieval is problematical and expensive since the previous licensee buried these reserves under overburden.

The Site Plans for Pit 2 are combined with Pit 3 and the Rehabilitation Plan is the same for both, being that of a passive recreational use as a lake.

Because Pit 2 (along with Pit 1 and 3) were/are being excavated below the groundwater level, during active extraction the site was kept dry through 'dewatering' that occurs by lowering the natural groundwater and discharging the water off-site. Today, the dewatering pumps continue to operate in an effort to keep the site dry since the site continues to be used as a haul road to link Pit 3 to Pit 1. Furthermore, it is intended that for several years upon the opening of Pit 3 Extension, the aggregate from those lands will also be hauled through Pit 2 to Pit 1 for processing. Ultimately, PCQ intends to construct a new processing plant within the Pit 3 lands and when that occurs, final rehabilitation and ultimately the surrendering of that portion of Licence 4444 will occur.

Because progressive rehabilitation is a key component of the Aggregate Resources Act and a policy requirement of the PPS, to date, PCQ has created side slopes around the perimeter of the proposed lake and initiated an extensive replanting program above what will be the final shoreline.

Once the dewatering pumps are removed, the site will begin to fill with both groundwater and surface water (i.e. precipitation). Because of the tightness or density of the insitu rock, Golder anticipates it will require many years for the groundwater to reach equilibrium. At that stage, the lake will be approximately 12.0 metres deep and be 50 hectares in size.

Refer to Figure 4 illustrating the final Rehabilitation Strategy for Pit 1 and Pit 2.

## 3.3 Pit 3

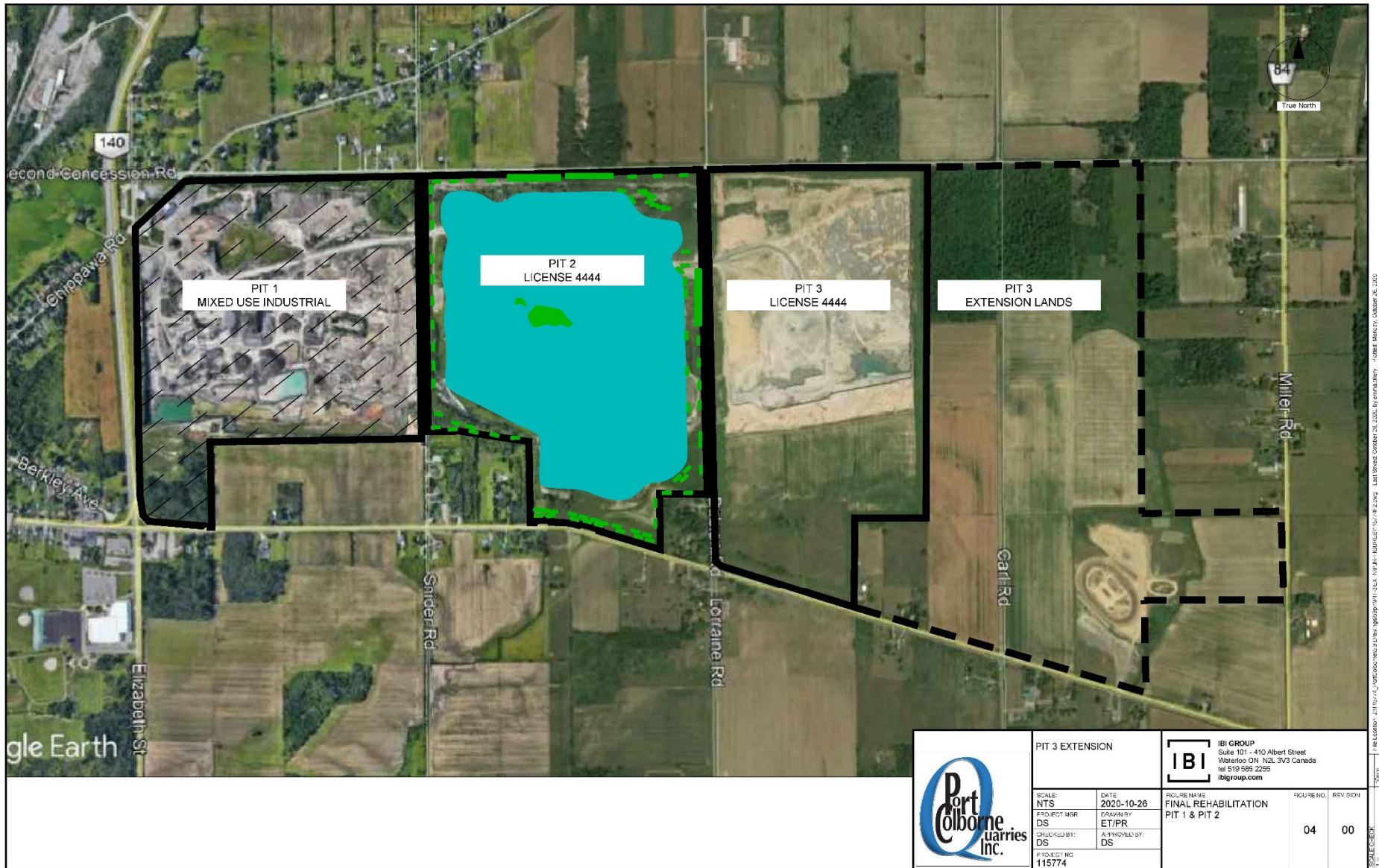
Pit 3 is located immediately east of Pit 2 and specifically east of Babion Road and totals 70.5 hectares. Pit 3 is licensed under the Aggregate Resources Act as Licence # 4444 and extraction is approximately 2/3 complete and is progressing in a north to south direction.



As with Pit 2, Pit 3 is being excavated below the groundwater level and is kept dry through 'dewatering' that occurs by lowering the natural groundwater and discharging the water off-site. Once again, when the dewatering pumps are removed, the site will begin to fill with both groundwater and surface water (i.e., precipitation).

COMPREHENSIVE REHABILITATION STRATEGY  
 PIT 1, PIT 2, PIT 3, PIT 3 EXTENSION

Prepared for Port Colborne Quarries Inc.

Figure 4 Final Rehabilitation Pit 1 and Pit 2



	PIT 3 EXTENSION		 IBI GROUP Suite 101 - 410 Albert Street Waterloo ON N2L 3V3 Canada tel 519 585 2255 ibigroup.com	FIGURE NO.	REV. SION
	SCALE: NTS PROJECT MGR: DS CHECKED BY: DS PROJECT NO: 115774	DATE: 2020-10-26 DRAWN BY: ET/PR APPROVED BY: DS		FIGURE NAME: FINAL REHABILITATION PIT 1 & PIT 2	04

To date, PCQ has begun to create side slopes around the northern perimeter of the proposed lake and as extraction continues southward, side sloping and vegetation planting will continue. However, final rehabilitation of Pit 3 will not be able to occur until after the Pit 3 extension is complete. The reasons for this are multiple. The primary reason is that the eastern face of Pit 3 will continue to be excavated eastward at the same general quarry floor elevation. Therefore, the dewatering pumps will need to continue to keep Pit 3 dry. Second, during the initial operation of Pit 3 Extension, the haul trucks will continue to feed the existing processing plant in Pit 1, therefore having to traverse through Pit 3. Lastly, once Pit 3 Extension is established, the processing plant will be relocated from Pit 1 to the Pit 3 quarry floor.

The Rehabilitation Plan for Pit 3 is that the lands are to be rehabilitated to a passive recreational use as a lake. The lake depth will be approximately 12.0 metres deep and total about 117 hectares in size. Subject to the approval of the Pit 3 extension, Pit 3 will extend eastward at the same or similar depth.

## 4 Proposed Extraction Site

### 4.1 Pit 3 Extension

As highlighted above, Pit 3 Extension will be a direct extension of Pit 3 with a similar final quarry floor. Therefore, once Pit 3 Extension is complete and the dewatering pumps removed, both the Pit 3 and Pit 3 Extension lands will begin to fill with water and ultimately become a lake that totals 71 hectares with a varying depth of 8.0 metres to 16.0 metres. Although the 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 (less steep).

As extraction is completed progressively, moving through the three phases, PCQ will progressively create the 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 wasted rock/rubble,
- iii. imported clean inert MECP approved fill, and
- iv. during the final extraction phase, the redistribution of the topsoil/subsoil within the perimeter berms.

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 (177 hectares) fill with water.

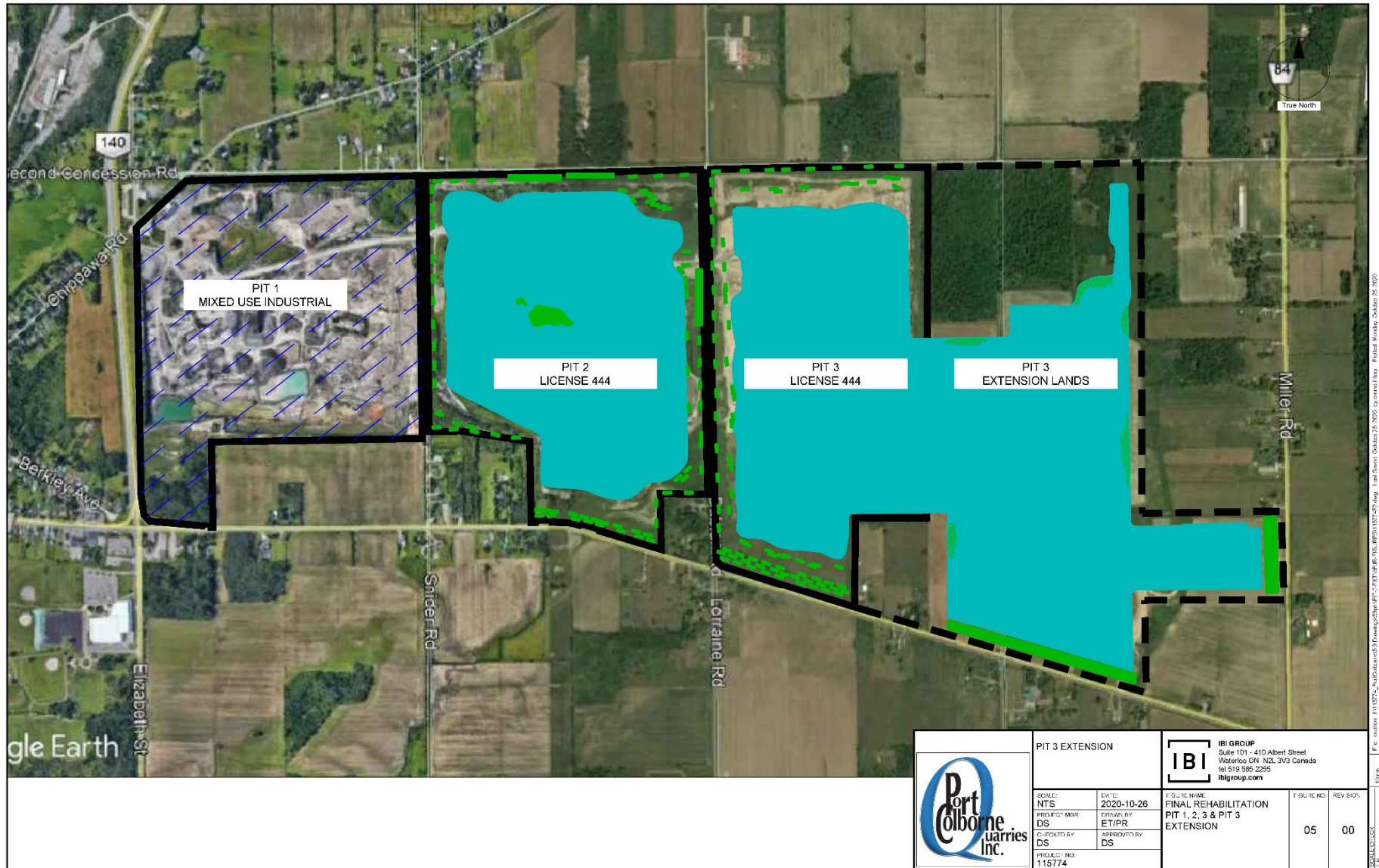
As the slopes are finalized, they will be vegetated with native grass legumes to provide maximum erosion and sedimentation control. Vegetation will also be planted around the ponds and upland along the setback.

Refer to Figure 5 illustrating the final Rehabilitation Strategy for Pit 1, Pit 2, Pit 3 and Pit 3 Extension

COMPREHENSIVE REHABILITATION STRATEGY  
 PIT 1, PIT 2, PIT 3, PIT 3 EXTENSION

Prepared for Port Colborne Quarries Inc.

Figure 5 Final Rehabilitation Pit 1, Pit 2, Pit 3, and Pit 3 Extension



	PIT 3 EXTENSION		IBI GROUP Suite 101 - 410 Albert Street Waterloo ON, N2L 3V3 Canada Tel 519 595 2295 ibigroup.com	PROJECT NO. 115774	IBI GROUP Suite 101 - 410 Albert Street Waterloo ON, N2L 3V3 Canada Tel 519 595 2295 ibigroup.com	PROJECT NO. 115774
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## 5 Current Rehabilitation Plan

Once completed, the PCQ lands will comprise of two lakes, being:

- a) the western lake located between Snider Road and Babion Road will be 50 hectares and,
- b) the eastern lake between Babion Road and Miller Road will be 177 hectares.

At this time, long-term ownership of the lands is intended to remain with PCQ.

## 6 Timing of Rehabilitation

Based on historical and anticipated extraction levels generated from this site, the following is the anticipated timing of the progressive rehabilitation and final rehabilitation of the various portions of the site. As a qualifier, this timing is heavily dependent on the stability of the aggregate market, timing of approvals of Pit 1 Site Alteration Permit and Pit 3 Extension and potentially other unforeseen influences on the provincial, regional and local market.

2030:	Pit 1:	Partially backfilled with engineered fill back up to original grade. Aggregate from Pit 3 Extension continues to be shipped for processing but plant is in its' final life stage.
	Pit 2:	Aggregate reserves are exhausted.
	Pit 3:	Final excavation being completed and progressive rehabilitation (side slopes) ongoing.
	Pit 3 Extension:	Being prepared for extraction.
2040:	Pit 1:	Fully backfilled with engineered fill and transitioned to a mixed-use industrial subdivision.
	Pit 2:	Dewatering pumps have been removed and the lake is beginning to fill.
	Pit 3:	Processing plant is operational on the quarry floor and the progressive rehabilitation of the side slopes is completed.
	Pit 3 Extension:	In full extraction mode and progressive rehabilitation of side slopes is ongoing.
2050:	Pit 2:	Partially full of water to form passive-use lake.
	Pit 3 and Pit 3 Extension:	Progressive rehabilitation of the side slopes of Pit 3 Extension is completed and the dewatering pumps have been removed and the lake is beginning to fill.

## 7 Long-Term Monitoring

During the life a licensed pit or quarry, along with self-filing of the annual Compliance Assessment Reports, MNRF staff undertake ongoing audits to ensure the operator remains in compliance with the approved Site Plans, and this includes phasing and progressive rehabilitation. A key component of Phasing is to ensure that as the operator begins a new extraction phase, that progressive rehabilitation is actively occurring in the previous phases in an ongoing manner.

With above water pits and quarries, once substantial portions of a site are progressively rehabilitated, it is possible to request MNRF to inspect those lands and request a surrender of that portion of the licence that has been rehabilitated.

That option is not available for a below water quarry as no final rehabilitation of any portion of the site would practically not be completed until all the lands have been progressively rehabilitated (proposed lake side slopes). However, based on this scenario, upon final extraction of the site is achieved, the amount of rehabilitation left to complete should only be minor.

Once the final 'progressive rehabilitation is accomplished, the licensee would contact MNRF to inspect the site and request full surrender of the licence.

Based on this approach, seldom is it necessary to require monitoring of a site beyond the final extraction period. From a public relations perspective; MNRF, the public and the aggregate industry (i.e. OSSGA) are typically anxious to have such sites not only fully rehabilitated, but the licence surrendered, so that the annual provincial tally of total lands rehabilitated can be showcased. Practically, and as noted above, by the end of the quarry life, the only remaining portion of the site that should necessitate rehabilitation work is the final side sloping of Phase 3. In advance of this, the shoreline should be backfilled and side slope vegetation (ground cover and trees/shrubs) planted.

If 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/gullying or vegetation die-out, that it is addressed, repaired and replaced as necessary, but beyond that, ongoing monitoring of the site is not being proposed.

There may be some ongoing surface and groundwater monitoring that an approval authority (i.e., Region) may request, but at this time, we are unaware of what those may include.

## 8 Comprehensive Rehabilitation Strategy

In order to provide a modified option for the Pit 2, Pit 3 and Pit 3 Extension lands, PCQ would suggest the following.

In support of the Niagara Region ROP Policies 6.C.8 and 6.C.9, PCQ would be prepared to examine the possibility of extracting the Babion Road right of way. These lands are owned by the City of Port Colborne which is an opened right-of-way. In further support of the removal of Babion Road, changes to the ARA include stronger support for excavation within a highway right-of-way.

Prior to the removal of dewatering pumps in Pit 2, and based on planning policies at the time, PCQ could consider the removal of Babion Road subject to:

- City of Port Colborne support,
- A Traffic Impact Study to confirm the full removal of the road would not impact existing traffic patterns,
- A hydrogeological investigation to ensure the linking of the proposed western lake and proposed eastern lake could be supported based on groundwater science.

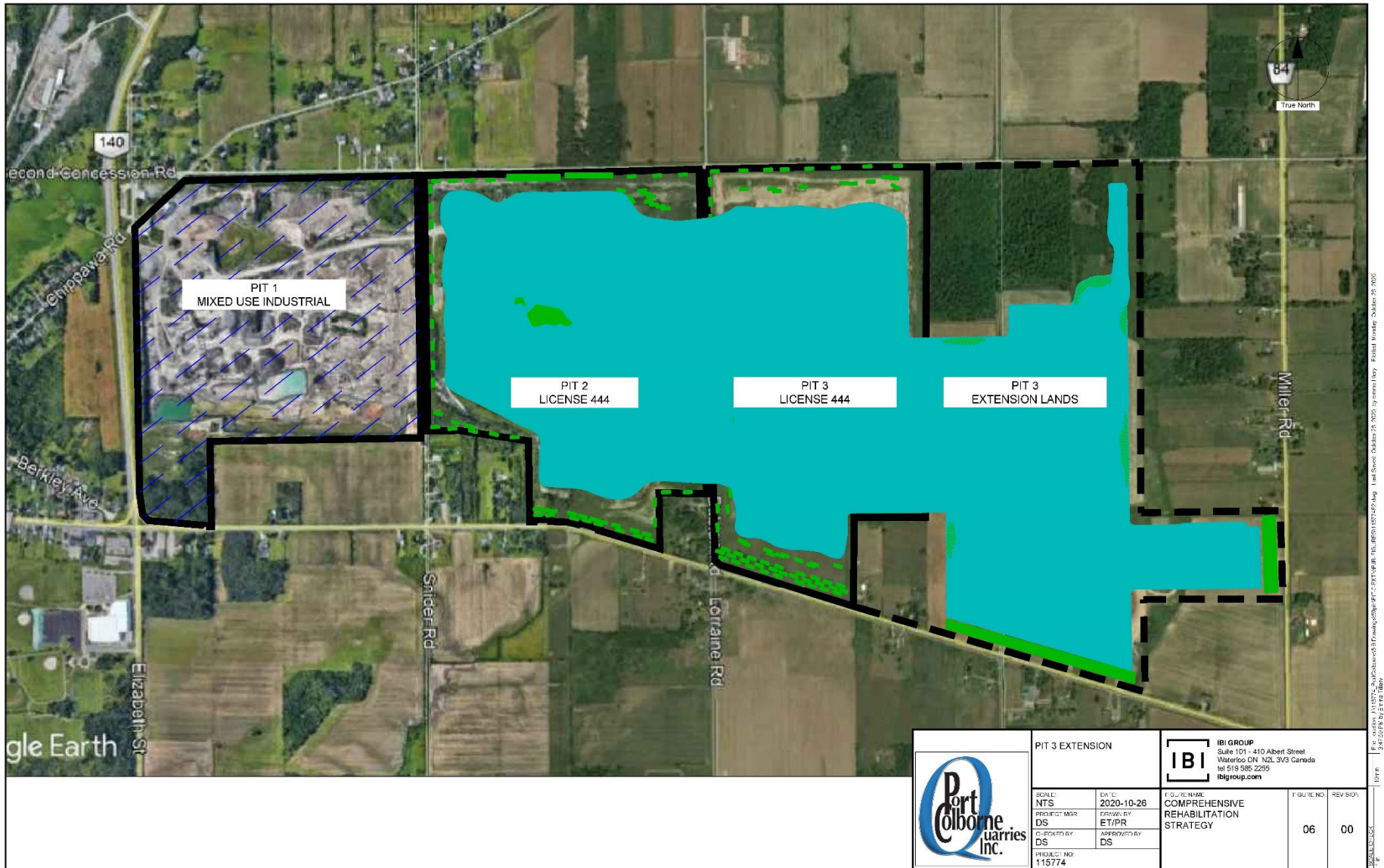
Based on the above, it is possible that a final rehabilitation design could look similar to what is illustrated on Figure 6.





COMPREHENSIVE REHABILITATION STRATEGY  
 PIT 1, PIT 2, PIT 3, PIT 3 EXTENSION

Prepared for Port Colborne Quarries Inc.

Figure 6 Comprehensive Rehabilitation Strategy



	PIT 3 EXTENSION		 IBI GROUP Suite 101 - 410 Albert Street Waterloo ON N2L 3V3 Canada tel 519 596 2255 ibigroup.com	PROJECT NO. 06	REV NO. 00	
	SCALE: NTS	DATE: 2020-10-26				PROJECT NAME COMPREHENSIVE REHABILITATION STRATEGY
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## 9 Summary

PCQ owns a large tract of land in the eastern portion of the City of Port Colborne. The lands are divided by two bisecting north/south local municipal roads (Snider Road and Babion Road). The various sub-portions of the overall site have varying licensing approval and therefore varying visions for final rehabilitation. In order to satisfy numerous provincial, regional and local planning policies, PCQ proposes a comprehensive rehabilitation strategy be developed that provides the following;

**Industrial Subdivision:** The western-most lands between Highway 140 and Snider Road be backfilled engineered clean inert MECP approved backfill up to the former grade elevations of the site and be transitioned to a mixed-use industrial use. The exception will be that a portion of the existing quarry wall backing onto Highway 140 will be left exposed (8.0 metres deep and 100.0 metres long) so that the existing Life Science 'Area of Natural or Scientific Interest (ANSI) be retained for public access/viewing for future education purposes.

**Western Lake:** The lands situated between Snider Road and Babion Road be rehabilitated into a passive-use lake that is approximately 50 hectares in size with an eventual final lake depth of 12.0 metres deep. The side slopes of the lake will be 3:1 and vegetated with grass cover and trees/shrubs. Final ownership of the lake will remain with PCQ.

**Eastern Lake:** The lands situated between Babion Road and Miller Road be rehabilitated into a passive use lake that is approximately 177 hectares in size with an eventual final lake depth of 8.0 metres to 16.0 metres deep. The side slopes of the lake will range from 2:1 to 4:1 and vegetated with grass cover and trees/shrubs. Final ownership of the lake will remain with PCQ.

Yours truly

IBI GROUP



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

DRS/baw



I hereby certify that this Comprehensive Rehabilitation Strategy was prepared by a Registered Professional Planner, within the meaning of the Ontario Professional Planner's Institute Act, 1994.

Oct. 30<sup>th</sup> 2020

Date

  
David R. Sisco, BA, MCIP, RPP

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

Mr. Sisco's expertise includes: land use planning involving large developments encompassing sites over 500 acres to single severances; development including residential, recreational, and commercial; coordination of resource management development projects for both the private sector and government bodies with specialized expertise in post-extraction rehabilitation techniques and design; management of provincial and community resource and policy based studies.

### Representative Experience

#### *Land Development*

**Pinebush Residential Park, Cambridge** – 200-1,000 unit plan for subdivision.

**Reid's Heritage Homes Ltd., Adult Style Community Plan, Township of Puslinch** – 200 units.

**Beechwood, Waterloo** – 125 acre residential/commercial neighbourhood.

**Pinebush Industrial Park, Cambridge** – 200 acre industrial/business park.

**Deercrest Park, Cambridge** – 200 acre rural estate and 800 to 1,200 mixed residential plan including senior's complex, nursing home.

**South Bend Estates, Grand Bend** – 500 acre, four season recreation complex including 18 hole golf course, motel, recreational park and 586 residential lots.

**Blueberry Trails Estates, Town of Wasaga Beach** – 400 lot residential plan.

**Hilltop Estates, Township of North Dumfries** – 350 lot mixed residential plan.

**Ontario Realty Corporation, City of Cambridge Official Plan** – 300-acre industrial proposal.

**Regina, Stayner** – Regina Boulevard Severance/Subdivision Development.

**Forwell, Kitchener** – Centennial Street, Industrial Development.

**Forestlawn, Waterloo** – Residential development of 60 lots.

**Simone, Riverbend Subdivision, Ayr** – Residential development and coordination of Phase 1–3.

**Woolner Residential, Kitchener** – Coordination assistance between pending residential development and ongoing extraction.

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### Education

B.A. (Geography), Wilfrid Laurier University, ON, 1994

Diploma of Applied Arts (Urban Design), Fanshawe College, London, ON, 1981

Commissioner For Taking Affidavits

WSIB Certification, Parts 1 and 2

### Experience

#### **2014–Present**

IBI Group, Waterloo, ON, Associate,

#### **2007–2014**

IBI Group, Kitchener, ON, Associate,

#### **1982–2007**

Planning & Engineering Initiatives Ltd., Planners, Engineers and Landscape Architects, Principal/Senior Planner

#### **1981**

Parking Authority of Toronto, Planning Technician

### Memberships

Canadian Institute of Planners, Full Member

Ontario Professional Planners Institute, Registered Professional Planner

Ontario Stone, Sand & Gravel Association

- Land Use Committee

Canadian Land Reclamation Association

Greater K-W Chamber of Commerce, Environment Committee

Certified By The Ontario Ministry of Natural Resources and Forestry to Prepare Site Plans Pursuant to the Aggregate Resources Act Section 8(4)



***Aggregate Resource Studies***

**Grand River Conservation Authority/MNR, Cambridge** – Aggregate and Floodline Study.

**Ontario Land Corporation, Kitchener** – Esker Study, Resource Investigation and Land Use Study.

**Ministry of Natural Resources, Southern Ontario, Aggregate Resources: State of the Resource Study**

**Ministry of Northern Development & Mines, Regional of Waterloo** – Ontario Government Survey, Comprehensive Update and Consolidation of Five Township Aggregate Resource Inventory Papers (ARIPS).

**Ministry of Northern Development & Mines, Wellington County** – Ontario Government Survey, Comprehensive Update and Consolidation of Twelve Township Aggregate Resource Inventory Papers (ARIPS).

**Grand River Conservation Authority, West Garafraxa Twp.** – Guelph and Belwood Lakes – Aggregate Resource Management Strategy.

**Caledon Community Resources Study, Town of Caledon** – Aggregate Resource Management Study, Master Rehab. Plan, Policy Formulation.

**Town of Caledon** – Caledon Shale Resources Study

**County of Brant** – Aggregate Resources Guide

***Aggregate Resource Investigations and Planning Services***

**Barrie Farm, North Dumfries Township** – Resource Investigation, Severance.

**Blue Circle, Dabrowski Pit, North Dumfries Township** – Licensing, Pit Plans, and Rezoning.

**Blue Circle, Cedar Street Pit, North Dumfries Township** – Resource Investigations, Pit Plans, Licensing, rezoning, and OMB.

**Blue Circle, David Pit, North Dumfries Township** – Licensing, Pit Plans, and Rezoning.

**Caledon Sand & Gravel, Caledon Pit, Caledon** – Pit Plans, Rehabilitation Designs.

**CBM, Brown Pit, North Dumfries Township** – Licensing, Pit Plans, and Rezoning.

**Cruickston Estate, University of Guelph, Cambridge** – Aggregate Resource Inventory.

**Dufferin, Aberfoyle Pit, Puslinch Township** – Noise Investigations.

**E & E Seegmiller Ltd., Cober Pit 2, Kitchener** – Pit Plans, Resource Investigation, Licence Application, and Rezoning.

**E & E Seegmiller Ltd., Woolner Pit, Kitchener** – Pit Plans, Resource Investigation, Licence Application, and Rezoning.

**E & E Seegmiller, Country Squire Pit, Woolwich Township** – Pit Plans.

**Fastrock, Oliver Pit, North Dumfries Township** – Pit Plans, Rehabilitation, Designs, Rezoning.

**Faulkner Pit, Guelph-Eramosa Township** – Resource Investigation, Pit Plans, Licensing, Official Plan Amendment and OMB.

**Fermar Group Inc., Greenfield Aggregates, Sherk Pit, North Dumfries Township** – Pit Plans, Licence Applications, Rezoning.

**Forwell Sand & Gravel, Bickle Upper Pit, Kitchener** – Pit Plans, Licence Application, Resource Inventory, Industrial Subdivision and Rezoning.

**Forwell Sand & Gravel, Bickle Lower Pit, Kitchener** – Pit Plans, Resource Investigation, Licence Application, Floodplain Design, and Rezoning.



**Forwell Sand & Gravel, Brown Pit, North Dumfries Township** – Pit Plans, Licence Application, Wetland Ecology, and Rezoning.

**Forwell Sand & Gravel, Blair Pit, Cambridge** – Pit Plans, Resource Investigation.

**Franceschini Brothers Ltd., Caledon** – Pit Plans, Resource Investigation.

**Gary Farms, West Garafraxa** – Pit Plans, Licence Application, Rezoning.

**Gingerich Pit, Wilmot Township** – Pit Plans, Resource Investigation, Licence Application, and Rezoning.

**Grand River Conservation Authority, Belwood Lake, West Garafraxa Township** – Aggregate Resource Investigations, and Rezoning.

**Grand River Conservation Authority, Guelph Lake, Guelph Township** – Aggregate Resource Investigations.

**Grand River Conservation Authority, Horst Pit, Waterloo** – Aggregate Resource Investigation, Pit Plans.

**Grand River Conservation Authority, Washington Pit, Blanford/Blenheim Township** – Aggregate Resource Investigations.

**Homefounders, Uxbridge** – OMB Hearing.

**Howe Island Resident's Association, Frontenac Island Township** – Peer Review of Proposed Quarry.

**Hunder Development Ltd., Hunsberger Pit, Woolwich Township** – Pit Plans, Licence Application.

**King & Benton Developments, Oak Park Pit, Brant County** – Licence Surrender.

**Kitchener, City of** – Resource Inventory, Pit Plans, Licence Application, Floodplain/Recreation Plan.

**Kuntz Topsoil Sand & Gravel, Bridge Street Pit, Township of Woolwich** – Pit Plans, Licence Application.

**Kuntz Topsoil Sand & Gravel, Jigs Hollow Pit, Township of Woolwich** – Pit Plans, Licence Application, Rezoning.

**Lake of Bays Township** – Multiple Land Use Compatibility, Justification Reports for Severances Contiguous to Pits.

**Lakeview Sand and Gravel, North Dumfries Township** – Pit Plans, Licence Application and Expansion.

**Maty Management, Ojibway Pit, City of Windsor** – Pit Plans, Licence Application.

**Milani, Rizmi Holdings, Vaughan** – EIS, Pit Plan, Licence Application.

**Mill-Gate Holdings, Cedar Creek Pit Expansion, North Dumfries Township** – Pit Plans, Licence Application, Rezoning.

**Preston Sand & Gravel Company Ltd., Croft Pit, Puslinch Township** – Pit Plans, Resource Investigation, Licence Application and Agricultural Rehabilitation, Below Water Table Extraction, Rezoning, Licence Surrender.

**Preston Sand & Gravel Company Ltd., MacArthur Pit, North Dumfries Township** – Pit Plans, Resource Inventory, Application, Agricultural Rehabilitation and Amendments, and Rezoning.

**Preston Sand & Gravel Company Ltd., Henning Pit, North Dumfries Township** – Pit Plans, Licence Application, Rezoning.

**Preston Sand & Gravel Company Ltd., Marshall Pit, Laurier Township** – Pit Plans, Licence Application.



**Preston Sand & Gravel Company Ltd., Bell Pit, Strong Township** – Pit Plans, Licence Application.

**Preston Sand & Gravel Company Ltd., Bala Quarry, Medora Township** – Quarry Plans, Licence Application.

**Preston Sand & Gravel Company Ltd., Bloomingdale Pit, Township of Woolwich** – Pit Plans (Extraction in Floodplain), Rezoning.

**Rapson Farms, Harvey Township** – Resource Investigation, Land Use Planning.

**Reid's Heritage Homes Ltd., Heritage Pit, Puslinch Township** – Resource Investigation, Pit Plans, Residential/Environmental Rehabilitation Plans, Rezoning, and Official Plan Amendment.

**Ross Roth, Roth Pit Expansion, Wilmot Township** – Pit Plans, Licence Application, Rezoning and Amendments.

**Tri-City Materials Ltd., Germet Pit Extension** – Licence Coordination and Rezoning.

**Tridon Construction Ltd., Heritage Pit, Municipality of Thames Centre** – Licence Coordination and OMB Hearing.

**Tridon Construction Ltd., Lakeside Pit, Municipality of Thames Centre** – Licence Coordination and OMB Hearing.

**Tullis Estates, Butler Pit Extension, North Dumfries Township** – Pit Plans, Licence Application, Rezoning.

**University of Guelph, Puslinch Pit, Township of Puslinch** – Pit Plans, Licence Application, Official Plan Amendment and Rezoning.

**Upper Grand District School Board** – Aggregate Assessment for a school site expropriation process.

**Warren Bitulithic, McMillan Pit, Puslinch Township** – Pit Plans, Resource Investigation, Licence Application, Groundwater Monitoring.

**Warren Bitulithic, Cattleland Pit, Wilmot Township** – Pit Plans, Resource Investigation, Licence Application and Sustainable Wetlands, and Rezoning.

**Warren Bitulithic, Brown/Cambridge Pit, North Dumfries Township** – Pit Plans, Residential Investigation, Licence Application, and Rezoning.

**Waterford Sand & Gravel Limited** – Vinemount Quarry Expansion – City of Hamilton – Expansion of a below water quarry.

**Wayne Monk, Bentinck Pit** – Resolution of Land Use Compatibility Issues With Pit Operator.

**William Seip Management Inc., Top of the Hill Pit, Wilmot Township** – Pit Expansion, Rezoning and Lowering of Pit Floor.

**Wilmot Township, Pit No. 1, Wilmot Township** – Expansion for Below Water Table Extraction.

### ***Guest Lecturer***

University of Guelph, LARC 4740 Case Study

University of Waterloo, Planning 403, Professional Practice and Administration

University of Waterloo, Planning 474, Aggregate Resource Planning, Development and Management

