

**Financial Impact Study  
Proposed Burlington Quarry Extension,  
Nelson Aggregates Co.**

**Prepared by:**



**April 2020**

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# Nelson Burlington Quarry Extension Financial Impact Study

## 1.0 Introduction

Nelson Aggregate Co. is applying for a proposed extension to its Burlington Quarry on lands located to the south and west of the existing Burlington Quarry. The proposed extension is located at Part Lot 1 and 2, Concession 2 and Part Lot 17 and 18, Concession 2, NDS (former geographic Township of Nelson), City of Burlington, Region of Halton.

The proposed licence area is 78.3 hectares and the proposed extraction area is 50.4 hectares. The South Quarry Extension is 18.3 hectares with a proposed extraction area of 14.5 hectares. The South Quarry Extension consists of lands currently used for agricultural crops. The West Quarry Extension is 60.0 hectares with a proposed extraction area of 35.7 hectares. The West Quarry Extension consists of lands currently used as a golf course.

The proposed extension includes 6 phases. Phases 1 and 2 are located to the south of the existing quarry and Phases 3-6 are located to the west of the existing quarry. Within the proposed extension there will be no processing and the extracted aggregate will be transported to the existing Burlington Quarry for processing and shipping to market utilizing the existing entrance/exit and haul route. Aggregate transported from the South Extension (Phases 1 & 2) will be transported by crossing No. 2 Side Road and aggregate transported from the West Extension (Phases 3-6) will be transported by internal haul routes on the quarry floor.

The Burlington Quarry Extension contains approximately 30 million tonnes of the highest quality aggregate resource in Southern Ontario. Nelson is applying for a maximum tonnage limit of 2 million tonnes per year, however we plan on extracting an average of 1 million tonnes per year. As a result, the South Extension is expected to operate for +/-9 years and the West Extension for +/-21 years.

Nelson's after use vision for the extension and existing quarry is to develop a future park. As a result, the rehabilitation plan for the South Extension includes a beach, lake, exposed quarry faces, wetlands and forested areas. The rehabilitation plan for the West Extension includes a series of ponds, wetlands, exposed quarry faces, forested areas and lakes.

As part of the Financial Impact Study, the City required an undertaking that Nelson will:

- Cover the costs to implement the required traffic control for this crossing based on the recommendations of the Traffic Impact Assessment;
- Cover the costs to upgrade and maintain the crossing on No. 2 Sideroad to municipal standards during the life cycle of the south extension;
- Complete the mitigation, monitoring and rehabilitation requirements, which will form a legislated requirement of the Aggregate Resources Act and therefore do not represent a public cost;
- Identify the potential cost of any long-term monitoring and mitigation and to confirm measures to ensure there is no financial liability to the public; and

- Cover the cost of any replacement water supply that has been impacted by the quarry.

Taking into consideration the Region's Aggregate Resources Reference Manual and the meeting with the City of Burlington, the Financial Impact Study will also:

- Include examples of other road crossings for mineral aggregate operations in the Region of Halton;
- Identify how much TOARC fees will be provided to the Region of Halton and City of Burlington which the Region of Halton Aggregate Resources Reference Manual notes are "payments for road improvements";
- Include provisions from the Municipal Act and Aggregate Resources Act that prohibit municipalities from charging fees for the on-going maintenance of haul routes;
- Estimate of TOARC fees paid by Nelson to the City of Burlington and Region of Halton since Nelson took ownership of the quarry in 1983;
- Quantify the taxes that will be paid to Region, City of Burlington and school boards as a result of the Burlington Quarry Extension; and
- Quantify direct and indirect economic impacts of jobs and spending at the Burlington Quarry Extension.

## 2.0 Undertaking of Financial Commitments

To ensure the Burlington Quarry Extension does not result in a financial liability to the public, Nelson commits to:

- Include a condition on the Aggregate Resources Act Site Plan which states: *“Prior to extraction commencing in the South Extension, the licensee will be responsible to upgrade the crossing on No. 2 Sideroad to municipal standards. During operations in the South Extension, the licensee will be responsible for maintaining this crossing. The licensee is responsible for all costs associated with the crossing, including any signage at the crossing.*
- Include the following notes on the Aggregate Resources Act Site Plan to ensure Nelson is responsible for the cost of any replacement water supply, if impacted by the quarry:

### **Well Interference Complaint Process**

If a water well complaint is received by the licensee the following actions will be taken:

- The licensee will notify MNRF and MECP of the complaint.
- The licensee will contact a well contractor in the event of a well malfunction and residents will be provided a temporary water supply within 24 hours, if the issue cannot be easily determined and rectified.

- The well contractor will contact the resident with the supply issue and rectify the problem as expediently as possible, provided landowner authorization of the work. If the issue raised by the landowner is related to loss of water supply, the licensee will have a consultant/contractor determine the likely causes of the loss of water supply, which can result from a number of factors, including pump failure (owner's expense), extended overuse of the well (owner's expense) or lowering of the water level in the well from potential quarry interference (licensee expense). This assessment process would be carried out at the expense of the licensee and the results provided to the homeowner.
- If it has been determined that the quarry caused the water supply interference, the quarry shall continue to supply water at the licensee's expense until the problem is rectified. The following mitigation measures shall be considered and the appropriate measure(s) implemented at the expense of the licensee:
  - adjust pump pressure;
  - lowering of the pump to take advantage of existing water storage within the well;
  - deepening of the well to increase the available water column;
  - widening of the well to increase the available storage of water;
  - relocation of the well to another area on the property;
  - drilling multiple wells; and
  - only at the request of a landowner would a cistern be installed.
- If the issue raised by the land owner is related to water quality, the licensee will have a consultant/contractor determine the likely causes of the change in water quality, and review monitoring results at the quarry and background monitoring results from the baseline well survey to determine if there is any potential correlation with the quarry. If it has been determined that the quarry caused a water quality issue, the quarry shall continue to supply water at the licensee's expense until the problem is rectified. The licensee shall be responsible for restoring the water supply by replacing the well or providing a water treatment system. Only at the request of a landowner would a cistern be supplied. The licensee is responsible for the expense to restore the water quality.
- Complete all of the requirements of the Aggregate Resources Act Operation and Rehabilitation Plan. The Aggregate Resources Act Site Plans form a legislated requirement and the licensee is required to comply with all of the conditions. The MNRF has the authority to issue orders, suspend or revoke the licensee for non-compliance.

Nelson has never had a license suspended or revoked for non-compliance with our Aggregate Resources Act Site Plans.

Even in a worst case scenario, if the licence is revoked for non-compliance, the aggregate resources industry including Nelson has contributed to a provincial fund that can be used to restore a site to ensure no long term environmental or public risk. As a result, there will be no financial liability to the public.

- Include a condition on the Aggregate Resources Act which states: *“Prior to the surrender of the Aggregate Resources Act License, the Licensee will provide to the satisfaction of the MNRF, confirmation that any long-term monitoring, pumping or mitigation will not result in a financial liability to the public.”*

### **3.0 Road Crossings**

The South Quarry Extension proposes a direct crossing on No. 2 Sideroad to the existing Burlington Quarry. The City of Burlington has requested examples of other road crossings for mineral aggregate operations in the Region of Halton.

The following are examples of where quarry/pit trucks cross municipal roads in the Region of Halton:

- Acton Quarry – There are 3 crossings. The crossings on 3<sup>rd</sup> Line North and 22<sup>nd</sup> Sideroad are controlled by lights and the crossing on 3<sup>rd</sup> Line South is controlled by signage.
- Milton Quarry – There is 1 crossing. The crossing is on Nassagaweya-Esquesing Townline and is controlled by signage.
- Limehouse Pit – There is 1 crossing. The crossing is located on Fourth Line and is controlled by signage.

In neighbouring municipalities, other examples include the Dundas Quarry (Concession 4W), Lafarge/Aecom Caledon Pit (McLaren Road and Willoughby Road), Graham Bros Caledon Pit (McLaren Road) and James Dick Caledon Pit (Kennedy Road).

### **4.0 Maintenance of Roads**

Trucks from the proposed Extension will utilize the existing entrance/exit and haul route. At Guelph Line the majority of trucks travel south. Regarding the use of local and regional roads for aggregate trucks, the Municipal Act states:

*“394. (1) No by-law under this Part shall impose a fee or charge that is based on, is in respect of or is computed by reference to,*

*(e) the generation, exploitation, extraction, harvesting, processing, renewal or transportation of natural resources. 2001, c. 25, s. 394 (1).”*

The Aggregate Act was recently amended to include the following provision:

*“1. In considering whether a licence for a pit or quarry under the Act should be issued or refused, the Minister or Local Planning Appeal Tribunal cannot have regard to ongoing*

*maintenance and repairs to address road degradation that may result from proposed truck traffic to and from the site.”*

Allowing trucks to use regional and local roads without a maintenance fee is consistent with regional and local practices for all other truck traffic in the municipality.

As summarized in Section 5.0 of this report, Nelson pays taxes and an Aggregate Resources Act levy to the Region and City of Burlington.

## **5.0 Financial Considerations**

The existing Burlington Quarry does not utilize most of the public services and infrastructure provided by the Region and the City. The public infrastructure that the quarry primarily relies upon is regional and local roads to transport its product to market. Approximately 75% of the aggregate is transported to consumers within the Region of Halton. The Region of Halton and City of Burlington also purchase aggregate from the quarry for its local infrastructure projects.

The existing Burlington Quarry has been an important part of the regional and local economy since 1953.

The existing Burlington Quarry generates significant revenues for the City of Burlington and Halton Region, as well as local employment opportunities and spin-off spending to other local businesses.

Based on Nelson’s readily available information, since 2009 they have paid \$3.5 million in property taxes and \$1.1 million in aggregate levies. Of the \$1.1 million paid in aggregate levies, \$560,000 was paid to the City and \$140,000 was paid to the Region.

A study was completed in 2008 for the Nelson Burlington Quarry Extension. The report was based on a 26 million tonne extension, whereas the current application is for 30 million tonnes. Based on this study, the proposed Quarry Extension would result in:

### **Employment:**

- 26 person years of employment during the site preparation stage;
- 48 permanent full time jobs at the quarry; and
- More than 500 additional outside workers who will provide contracted services to the quarry operation.

### **City of Burlington Revenues:**

- Property taxes – about \$78,000 in total municipal property taxes per year (in 2008 dollars) or about \$2.34 million over the 30 years extended life of the quarry.

- Aggregate licence fee: \$3.6 million based on 30 million tonnes (based on 2019 levy amount 19.8 cents of which 61% goes to Burlington).

**Halton Region Revenues:**

- Property taxes – about \$95,000 in Regional property taxes per year (in 2008 dollars) or about \$2.85 million over the 30 years extended life of the quarry.
- Aggregate licence fee \$900,000 based on 30 million tonnes (based on 2019 levy amount 19.8 cents of which 15% goes to Halton).

**Boards of Education:**

- About \$136,000 per year will be generated in education taxes or about \$4.08 million over the 30 year extended life of the quarry.

**Spin Offs to Local Businesses:**

- A portion of the estimated \$3.6 million in annual wages and estimated \$1.3 million earned by other workers providing contracted services on a regular basis to the quarry will be spent locally.
- A portion of the estimated \$7.8 million spent annually by the quarry on operating supplies and services will be done locally.
- A portion of the estimated \$3.2 million spent annually the quarry on trucking services will be done locally.

Attached as Appendix A is a copy of the report titled "The Market for Crushed Stone in the GTA West and Economic Benefits of the proposed Nelson Burlington Quarry Extension, prepared by Altus Group, dated December 2, 2008.



Quinn M. Moyer  
President



Bruce Hustins  
Controller

# APPENDIX A

**The Market for Crushed  
Stone in the GTA West and  
Economic Benefits of the  
Proposed Nelson Burlington  
Quarry Extension**

Independent Real Estate Intelligence

**December 2, 2008**



**The Market for Crushed Stone in the GTA  
West and Economic Benefits of the  
Proposed Nelson Burlington Quarry  
Extension**

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December, 2008

## EXECUTIVE SUMMARY

Altus Group Economic Consulting (formerly Clayton Research) was commissioned by Nelson Aggregate Co. to prepare this report related to its Burlington Quarry extension.

The quarry extension will provide additional licensed reserves of crushed stone for the GTA West market, which will help to fill some of the anticipated supply shortages that are expected to emerge over the next 20 years.

Moreover, the quarry extension will ensure that the quarry operation continues to generate revenues for the City of Burlington and Halton Region, as well as local employment opportunities and spin-off spending to other local businesses, as summarized below.

<b>Employment</b>	<p>26 person-years of employment during the site preparation stage</p> <p>48 permanent full-time jobs at the quarry</p> <p>More than 500 additional outside workers who provide contracted services to the quarry operation</p>
<b>City of Burlington Revenues</b>	<p>Property taxes: about \$78,000 in total municipal property taxes per year (in 2008 dollars), or about <b>\$1.2 million</b> over the 15 year extended life of the quarry</p> <p>Aggregate license fee: <b>\$108,000</b> per year or about <b>\$1.6 million</b> over the 15 year extended life of the quarry</p>
<b>Halton Region Revenues</b>	<p>Property taxes: about <b>\$95,000</b> in Regional property taxes per year, or about <b>\$1.4 million</b> over the extended quarry life</p> <p>Aggregate license fee: <b>\$27,000</b> per year or about <b>\$405,000</b> over the extended life of the quarry</p>

<p><b>Indirect Financial Benefits for City of Burlington, Region of Halton and Local Residents</b></p>	<p>Close by aggregate supply for own building programs</p> <p>Voluntary contributions made by the quarry (e.g. community events sponsorships, fundraising campaigns, etc.) of approximately \$75,000 per year</p>
<p><b>Boards of Education</b></p>	<p>About <b>\$136,000</b> per year will be generated in education taxes (or about <b>\$2 million</b> over the extended life of the quarry), without any additional financial burden on local Boards of Education</p>
<p><b>Spin-offs to Local Businesses</b></p>	<p>A portion of the estimated <b>\$3.6 million</b> in annual wages earned by quarry employees, as well as the estimated <b>\$1.3 million</b> earned by workers during the site preparation stage and the incomes earned by the over 500 other workers providing contracted services on a regular basis to the quarry, will be spent locally</p> <p>A portion of the estimated <b>\$7.8 million</b> spent annually by the quarry on operating supplies and services will be done locally</p> <p>A portion of the estimated <b>\$3.2 million</b> spent annually by the quarry on trucking services will be done locally</p> <p>Over the 15 year extended life of the quarry, spending on operational supplies and services is expected to total an estimated <b>\$165 million</b></p>

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# 1 INTRODUCTION

Altus Group Economic Consulting (formerly Clayton Research) was commissioned by Nelson Aggregate Co. to prepare this report related to its Burlington Quarry extension. The quarry extension would allow Nelson Aggregate to extend the life of its current quarry operations.

In addition to this introduction, this report contains the following major sections:

- **Section 2: The Market for Crushed Stone in the GTA West** outlines a scenario of what could reasonably be expected to occur in terms of the demand and supply aspects of the market for crushed stone over the next 20 years in the western portion of the Greater Toronto Area (referred to hereafter as the "GTA West").<sup>1</sup> The analysis concludes that additional sources of supply are needed to address the expected demand levels, such as would be provided by additional licensed supply from the Nelson Burlington Quarry extension.
- **Section 3: Economic Benefits of the Proposed Nelson Burlington Quarry Extension** then examines the economic benefits associated with the proposed quarry extension. The analysis shows that the quarry extension will ensure the continuation of direct and indirect economic benefits for local governments, local businesses and local residents in terms of the following:
  - employment, both during the site preparation stage and on-going quarry jobs;
  - financial contribution to the City of Burlington's revenues through property taxes and aggregate license fees;
  - financial contribution to Halton Region's revenues through property taxes and aggregate license fees;

<sup>1</sup> The GTA West is comprised of the Regional Municipalities of Halton and Peel, and the areas of the City of Toronto and the Regional Municipality of York that are west of Yonge Street. Crushed stone is used in this report in reference to aggregate derived from bedrock quarries.

- indirect financial benefits to the City of Burlington and Halton Region due to the availability of close by aggregate supply for their own building programs, and to the local residents in the form of donations supporting the local communities;
- indirect benefits for local Boards of Education; and
- spin-off benefits to local businesses.

Note that all dollar figures in this report are expressed in constant 2008 dollars.

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## **2 THE MARKET FOR CRUSHED STONE IN THE GTA WEST**

“Construction aggregate” is the term used to collectively describe crushed stone, sand and gravel. Crushed stone is produced at limestone and dolostone quarries by drilling and blasting bedrock formations.

This section looks at the expected demand and supply situation for crushed stone in the GTA West over the next 20 years.

### **2.1 THE DEMAND FOR CRUSHED STONE IN THE GTA WEST**

This section reviews the demand for crushed stone in the GTA West since the mid 1980s and expected average annual demand levels over the next 20 years.

#### **2.1.1 A Note on Demand versus Production**

For the purposes of this study, the “demand” for crushed stone in the GTA West refers to the amount actually consumed within the GTA West. This is not the same as the amount of crushed stone physically produced within the GTA West. This is because the GTA West is currently not self-sufficient in terms of crushed stone. Rather, it is a net importer of crushed stone from surrounding areas.

#### **2.1.2 GTA West Has Consumed About 14 Million Tonnes of Crushed Stone on Average Each Year over the Past 22 Years**

Estimates of the demand for crushed stone for the GTA West are provided on Figure 2-1. On an average annual basis, about 14 million tonnes of crushed stone have been consumed per year in the past 22 years, ranging from a low of about 10 million tonnes per year in the economic downturn of the 1991-1995 period to a high of about 16 million tonnes per year in the 1986-1990 period.

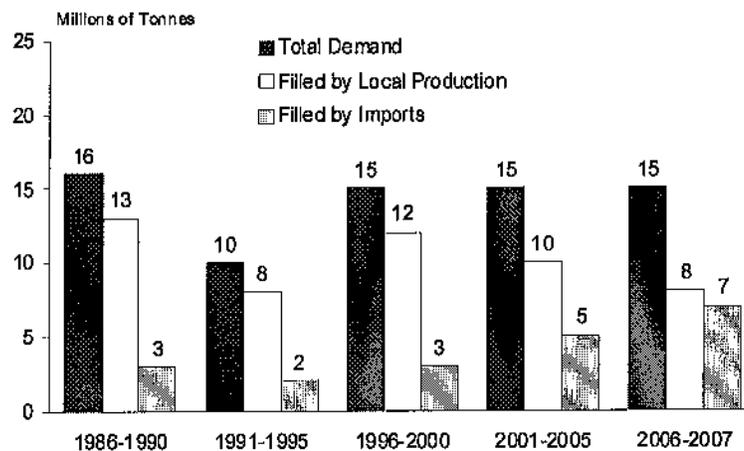
#### **2.1.3 The GTA West Has Become Increasingly Reliant on “Imports” to Fill Its Crushed Stone Needs**

A growing and significant proportion of the crushed stone being consumed in the GTA West is being imported (i.e. originating from quarries located outside of the GTA West).

Estimates prepared by Altus Group Economic Consulting indicate that the proportion of the demand for crushed stone in the GTA West filled by imports has risen from less than 20% in the latter 1980s to almost 50% in the past 2 years (Figure 2-1).

Figure 2-1

### Average Annual Demand for Crushed Stone, GTA West



Source: Estimates by Altus Group Economic Consulting based on data from Ministry of Natural Resources, TOARC and Aggregates & Roadbuilding Magazine

#### 2.1.4 Long-term Historical Average Used for Demand/Supply Analysis

The long term historical annual average demand for crushed stone in the GTA West over the 1986-2007 period was about 14 million tonnes per year. As this 22 year period contains periods of both economic upturns and downturns, this average demand level provides a reasonable basis for analyzing the future long-term demand/supply relationship.

## 2.2 THE SUPPLY OF CRUSHED STONE IN THE GTA WEST

This section looks at the currently available sources of supply of crushed stone within the GTA West and supply constraints.

### 2.2.1 A Note on Supply Definitions

When referring to the supply of aggregate in this report, a distinction is made between the amount of "resource" and the amount of "licensed reserves":

- **Resource** refers to the total amount of aggregate that potentially could be extracted. It includes lands that have not been approved for extraction and do not have an aggregate license, as well as those that have been approved and licensed. Constraints (such as geographic variability, land availability, etc.) reduce the amount of resource that could potentially be considered for extraction.
- **Licensed reserves** is a subgroup of "resource" that only includes those resources in areas that have been approved for extraction for which an aggregate license has been obtained and therefore extraction can currently take place.

This distinction is an important one to make in terms of determining remaining years of supply of crushed stone, particularly in the short to medium term. That is because the lead time to get a new site into production (i.e. from initial selection of site through to obtaining an aggregate license and then to first shipment) in the GTA is a minimum of roughly 6 years, assuming there is not an Ontario Municipal Board (OMB) hearing; an OMB hearing can add another 1.5 to 2 years.<sup>2</sup>

As such, licensed reserves represent a better measure of short to medium term potential supply of crushed stone than does estimated resource tonnage.

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<sup>2</sup> Planning Initiatives, State of the Resource Study, 1992

## 2.2.2 Remaining Licensed Reserves of Crushed Stone in the GTA West Will Not Be Sufficient to Meet Demand over the Next 20 Years

Estimates prepared by Beck in 2002<sup>3</sup> showed remaining licensed reserves of dolostone among the four quarries operating in the GTA West of about 107 million tonnes as of the end of 2002. These reserves include both Amabel dolostone and Reynales (according to Beck, the Amabel is high quality and the quality of the Reynales will likely be limited).

Since that time, the following has occurred:

- During the 2003-2007 period, about 44 million tonnes of crushed stone were extracted from the GTA West quarries; and
- During this same time period, an application by Dufferin Aggregates to extend its Milton Quarry was approved, adding about 65 million tonnes to licensed reserves.

The remaining licensed reserves at the end of 2007 therefore are estimated at about 128 million tonnes (the 107 million tonnes remaining at the end of 2002 less production of 44 million tonnes during 2003-2007, plus new licensed reserves of 65 million tonnes).

How quickly these reserves will be depleted will depend on how much the assumed average annual demand level of 14 million tonnes is filled by local production versus imports:

- Assuming no imports, current licensed reserves would be depleted in about 9 years. This scenario would require individual quarries with remaining licensed reserves be operationally able and willing to step up production from their recent combined level of about 8 million tonnes per year (based on the past 2 years) to about 14 million tonnes per year (and that remaining producers fill the gap as some sites become depleted). This appears unlikely given in recent years the GTA West suppliers appear to have done the opposite, i.e. cut back on production in order to stretch out the remaining years of life of their reserves and therefore keep their operations going for a longer period.

<sup>3</sup> John Beck, Witness Statement, Town of Caledon OPA 161, December 2002.

- Assuming local production at the average annual level of the past 22 years (i.e. about 10.5 million tonnes per year) and 3.5 million per year of demand filled by imports, existing licensed reserves would be depleted in about 12 years time.
- Assuming local production remains near the estimated situation in the past 2 years (i.e. about 8 million tonnes a year) and 6 million tonnes a year of demand is filled by imports, remaining licensed reserves would represent about 16 years of supply. However this scenario means continued relatively high levels of imports.

Looking at a 20 year timeframe, in all 3 scenarios the existing licensed reserves of crushed stone in the GTA West would fall short of the 20 year need (of 280 million tonnes), with the shortfalls ranging from 32 million tonnes to 152 million tonnes, depending on the extent to which imports vs. local production plays a role.

Moreover, it is not sufficient for licensed reserves simply to match the expected level of demand over the next 20 years (and as shown, in fact, reserves today fall short of expected demand over the next 20 years). To deal with unforeseen circumstances (such as higher than expected demand, fluctuating market conditions, uncertainties/changes in the planning process, production delays/stoppages among one or more producers, etc.), reserves well in excess of expected levels of total demand need to be available. This will help to avoid shortages - and potentially escalating prices.

## 2.3 CONCLUSION

Given the long planning timeframes discussed previously to get new sites into production and potential for higher than expected demand levels and/or potential disruptions to supply, including additional production cuts by current quarry operators in order to extend their operating years, the local supply situation in the GTA West with respect to crushed stone can already be characterized as critical.

Supply constraints could also result in additional upward pressure on the price of crushed stone in the GTA West. If so, this would have flow-through implications for the cost of construction work, and a negative financial impact on the residents and governments in the GTA West, including Halton Region.

### **3 ECONOMIC BENEFITS OF THE PROPOSED NELSON BURLINGTON QUARRY EXTENSION**

This section examines the economic benefits associated with the proposed extension to the Nelson Burlington Quarry.

The quarry extension site encompasses approximately 200 acres, with a proposed excavation area of about 127.5 acres. When the quarry is fully operating, it is expected to have 48 on-site employees, with annual stone production of about 1.8 million tonnes per year. The extension is expected to prolong the life of the existing quarry by about 15 years.

The proposed quarry extension will ensure that the quarry continues to have substantial direct and indirect economic benefits for local governments, local businesses and local residents in terms of the following:

- Employment, both during construction and permanent jobs created once the extension is operational;
- Contribution to the City of Burlington's revenues through property taxes and aggregate license fees;
- Contribution to Halton Region's revenues through property taxes and aggregate license fees;
- Indirect financial benefits to the City of Burlington and Halton Region and local residents;
- Indirect benefits for local Boards of Education; and
- Spin-off benefits to local businesses.

#### **3.1 EMPLOYMENT IMPACTS**

There are two aspects to the employment benefits: temporary jobs created during the site preparation stage and on-going employment once the extension is operational.

##### **3.1.1 Employment Generated During Site Preparation**

The site preparation will generate work both directly and indirectly. Directly, jobs are created in the engineering construction industry; indirectly, work is generated in the industries that support the engineering construction

industry with materials, equipment and other inputs that the site preparation requires.

For every \$1 million spent on engineering construction, it is estimated that about 7.5 direct person-years of employment and 4.0 indirect person-years of employment are generated. The estimated \$2.25 million that Nelson Aggregate Co. expects to spend on the site preparation therefore would generate about 26 person-years of employment: 17 person-years in on-site work, and 9 in the supporting businesses. Most of the jobs are expected to be filled by Halton Region residents.

Figure 3-1

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**Estimated Employment Generated from Site Preparation,  
Proposed Nelson Burlington Quarry Extension**

Estimated Site Preparation Costs	Person-Years of Employment Generated				
	Per \$Million		Total Employment		
	Direct	Indirect	Direct	Indirect	Total
\$2,250,000	7.50	4.00	17	9	26

Source: Estimates by Altus Group Economic Consulting

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### 3.1.2 On-Going Employment

The quarry extension will also provide on-going employment benefits. Based on employment for the existing quarry, it is expected that there will be about 48 full-time positions at the quarry once it is fully operational. It is expected that the majority of these jobs will be filled by residents of Halton Region.

In addition, more than 500 additional jobs are expected to be generated for outside workers who provide contracted services to the quarry operation (including truck drivers, crane operators, electricians, plumbers, welders, contract crushers).

## 3.2 CITY OF BURLINGTON REVENUES

The proposed Nelson Burlington Quarry extension will directly generate revenues for the City of Burlington in two main areas: property taxes and aggregate license fees.

### 3.2.1 Municipal Property Taxes

Local property taxes generated once the quarry extension is operational will be a function of the assessed value applied to the site and the applicable property tax rates.

Both the existing site and the extension site will be used for the quarry operations, so the combined assessments for both properties are relevant for the analysis here.

It is not possible to determine with certainty what exactly the assessed value for the site will be, as it is ultimately the Municipal Property Assessment Corporation (MPAC) that will make that determination. However, assuming comparable per acre industrial assessment for the extension as the existing site, the assessed value of the quarry operation including the extension is as per Figure 3-2.

Figure 3-2

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#### Estimated Assessed Value for the Proposed Burlington Quarry Extension\*

	Total Value
Assessed residential	\$8,300,000
Assessed commercial	\$600,000
Assessed industrial	\$5,500,000
<b>Total</b>	<b>\$14,400,000</b>

\* Includes the existing quarry site, which would also continue to be part of the operation

Source: Estimates by Altus Group Economic Consulting

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In the City of Burlington, the municipal property tax rate for industrial properties for 2008 is 0.821009% and for the residential class 0.357225%.

Based on the assumed assessment values and these tax rates, the annual municipal property tax revenues from the quarry including the extension in 2008 dollars are estimated at approximately \$78,000 per year, or about \$1.2 million over the extended life of the quarry.

Figure 3-3

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**Estimated Annual Municipal Property Tax Revenues  
from the Proposed Nelson Burlington Quarry Extension**

	Assessment \$	2008 Municipal Tax Rate %	Municipal Tax Revenue \$
Residential	\$8,300,000	0.357225%	\$29,650
Commercial	\$600,000	0.520298%	\$3,122
Industrial	\$5,500,000	0.821009%	\$45,155
Total	\$14,400,000		\$77,927

Source: Estimates by Altus Group Economic Consulting

### 3.2.2 Aggregate License Fee

From 1990 up until the end of 2006, a 6.0 cents per tonne license fee had applied to aggregate production in Ontario under the Aggregate Resources Act. Effective January 1, 2007, this fee was increased to 11.5 cents per tonne. The fee is divided as follows:

- 6.0 cents to the lower tier municipality
- 1.5 cents to the upper tier municipality
- 3.5 cent to the Province
- 0.5 cents to the Abandoned Pits and Quarries Fund (for rehabilitation purposes)

The proposed Nelson quarry extension is expected to produce about 1.8 million tonnes of aggregate per year. This translates into annual revenue for the City of Burlington of about \$108,000 or about \$1.6 million over the expected extended life of the quarry.

Figure 3-4

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**Estimated Annual Aggregate License Fees Generated from the  
Proposed Nelson Burlington Quarry Extension**

Estimated Annual Production tonnes	Aggregate License Fee Rate		Total Aggregate License Fees Revenue, City of Burlington
	Total per tonne	To City	
1,800,000	\$0.115	\$0.060	\$108,000

Source: Altus Group Economic Consulting

### 3.3 HALTON REGION REVENUES

The proposed Nelson Burlington Quarry extension will directly generate revenues for Halton Region in two main areas: property taxes and aggregate license fees.

#### 3.3.1 Region Property Taxes

The applicable Region tax rate for industrial properties for 2008 is 1.017950%, for commercial class 0.614684% and for the residential class 0.422028%.

Based on the assumed assessment values and these tax rates, the estimated annual Region property tax revenues from the quarry including the extension are estimated at approximately \$95,000 per year in 2008 dollars, or about \$1.4 million over the extended life of the quarry.

Figure 3-5

#### Estimated Annual Regional Property Tax Revenues from the Proposed Nelson Burlington Quarry Extension

	Assessment \$	2008 Regional Tax Rate %	Regional Tax Revenue \$
Residential	\$8,300,000	0.422028%	\$35,028
Commercial	\$600,000	0.614684%	\$3,688
Industrial	\$5,500,000	1.017950%	\$55,987
Total	\$14,400,000		\$94,704

Source: Estimates by Altus Group Economic Consulting

#### 3.3.2 Aggregate License Fee

As discussed earlier, 1.5 cents of the total 11.5 cents per tonne of aggregate produced license fee goes to the upper tier municipality (in this case the Regional Municipality of Halton). When fully operational, the proposed Nelson quarry extension is expected to produce about 1.8 million tonnes of aggregate per year. This translates into annual revenue for Halton Region of about \$27,000 or about \$405,000 over the expected extended life of the quarry.

Figure 3-6

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**Estimated Annual Aggregate License Fees Generated from the Proposed Nelson Burlington Quarry Extension**

Estimated Annual Production tonnes	Aggregate License Fee Rate		Total Aggregate License Fees Revenue, Region of Halton
	Total	To Region per tonne	
1,800,000	\$0.115	\$0.015	\$27,000

Source: Altus Group Economic Consulting

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### 3.4 INDIRECT FINANCIAL BENEFITS FOR THE CITY OF BURLINGTON, HALTON REGION AND LOCAL RESIDENTS

There are several other benefits that would accrue to the City of Burlington, Halton Region and the local residents as discussed below.

#### 3.4.1 Close Supply of Aggregate for Own Building Programs

The stone available from the proposed Nelson Burlington Quarry extension will provide close to market supply for the City and Region's own building programs. As transportation costs can comprise a significant proportion of the delivered cost of aggregate, close by supply provides a cost advantage.

#### 3.4.2 Voluntary Contributions

The aggregate industry in Ontario contributes back to the local communities through various forms of donations, sponsorships, etc. In conjunction with its existing quarry operation, Nelson Aggregates is active in this respect, contributing roughly \$75,000 per year, and is expected to continue to do so in association with the quarry extension.

### 3.5 BOARDS OF EDUCATION

In addition to City of Burlington and Halton Region property taxes outlined earlier, there is another layer of property taxation - the education property tax component. These taxes are generated to the provincial government, who then allocate funds throughout the province (not necessarily in proportion to the amounts paid within each municipality). While not direct revenues for the local boards of education, ultimately they share in the availability of these funds.

The same assessment base is used as for the municipal property taxes but the tax rates differ, as shown below.

Figure 3-7

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**Estimated Annual Education Property Tax Revenues from the Proposed Nelson Burlington Quarry Extension**

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	<b>Assessment</b> \$	<b>2008 Education Tax Rate</b> %	<b>Education Tax Revenue</b> \$
Residential	\$8,300,000	0.26400%	\$21,912
Commercial	\$600,000	1.37466%	\$8,248
Industrial	\$5,500,000	1.92303%	\$105,767
<b>Total</b>	<b>\$14,400,000</b>		<b>\$135,926</b>

Source: Estimates by Altus Group Economic Consulting

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Almost \$136,000 in education property taxes is expected to be generated each year by the quarry including the extension, or about \$2 million in 2008 dollars over the extended life of the quarry.

### 3.6 SPIN-OFF BENEFITS TO LOCAL BUSINESSES

Local businesses will benefit from sales associated with spending done by quarry extension employees and the quarry extension itself as part of its normal operation.

#### 3.6.1 Spending by Workers on Local Goods and Services

The wages paid to the 48 full-time employees at the quarry are estimated to be about \$3.6 million annually, based on current wages at the existing Burlington Quarry site.

In addition, about \$1.3 million in wages will be earned by the workers employed during the site preparation stage; there will also be additional wages earned by the over 500 other workers providing contracted services on a regular basis to the quarry.

These wages will generate spending on goods and services. As the majority of these workers are expected to be local residents, they can be expected to do a large portion of their spending on these goods and services within the City of Burlington and Halton Region.

### 3.6.2 Spending Related to Quarry Operations on Local Goods and Services

Nelson Aggregate Co. currently spends about \$7.8 million on goods and services to support the existing Burlington Quarry operation. Another \$3.2 million is spent on trucking services. A comparable amount of spending is expected to occur for the quarry extension.

Over the 15 year extended life of the quarry, spending on operational supplies and services by Nelson Aggregate Co. is expected to total an estimated \$165 million. It is expected that a large portion of this spending will be done locally within the City of Burlington and the broader Halton Region.

### 3.7 CONCLUSION

The total revenues generated by the proposed Nelson Burlington Quarry extension over the additional 15 year life of the quarry are expected to be substantial:

- City of Burlington – approximately \$2.8 million (in 2008 dollars)
- Halton Region – approximately \$1.8 million (in 2008 dollars)

The quarry extension will also ensure continued employment opportunities, many of which are filled by residents of Halton Region.

In addition, there are other indirect benefits that would continue to accrue to the City of Burlington and Halton Region, as well as the local residents, including:

- The price advantage of close by supply of aggregate for governments' own building programs;
- Voluntary donations and sponsorships to the local communities by Nelson Aggregate Co.
- Generation of education taxes, which indirectly benefit local school boards without any additional burden on the school systems; and
- Spin-off impacts to local businesses through the wages spent by the quarry workers, and spending related to the quarry operations.