TO: Community Development Committee

SUBJECT: Nelson Quarry Application For a New Quarry - Official Plan Amendment before the Joint Board


Report Date: October 16, 2009 Ward(s) Affected: 1 2 3 4 5 6 All

Date to Committee: October 26, 2009 Date to Council: November 9, 2009

Purpose:

To receive and accept the JART Report on The Nelson Aggregate Co. Burlington Quarry by the Joint Agency Review Team.

To inform committee and recommend a City position regarding applications to amend the Official Plan, the Regional Official Plan; the Niagara Escarpment Plan and for a license under the Aggregate Resources Act to permit a new dolostone quarry south of #2 Side Road;

To recommend positions on the proposed quarry application associated changes to the timing of final rehabilitation of the existing quarry and the permit to take water application to support the proposed quarry.

Recommendations:

A. THAT Burlington Council receive and file the final report of the Joint Agency Review Team.

B. THAT Burlington Council does not support the proposal by Nelson Aggregate Co. to establish and operate a quarry on lands within the City described as Part of Lots 17 and 18, Concession 2 south of No. 2 Sideroad, and to process this aggregate on lands described as Part of Lots 1 and 2, Concessions 2 and 3 north of No. 2 Sideroad and recommend the applications be refused.

C. THAT consistent with Council’s position on the Nelson Quarry proposal, Council adopts the following positions in respect of existing applications by Nelson
Aggregate Co. on lands south of No. 2. Sideroad:

a) Burlington Council refuse the amendment to the City's Official Plan proposed by Nelson Aggregate Co. to designate for aggregate extraction lands within the City described as Part of Lots 17 and 18, Concession 2, south of No. 2 Sideroad;

b) Burlington Council recommends refusal of the amendment to the Region of Halton's Official Plan proposed by Nelson Aggregate Co. to designate for aggregate extraction lands within the City described as Part of Lots 17 and 18, Concession 2, south of No. 2 Sideroad;

c) Burlington Council recommends refusal of the amendment to the Niagara Escarpment Plan proposed by Nelson Aggregate Co. to designate for aggregate extraction lands within the City described as Part of Lots 17 and 18, Concession 2, south of No. 2 Sideroad;

d) Burlington Council recommends refusal of a development permit under the Niagara Escarpment Planning and Development Act requested by Nelson Aggregate Co. to permit aggregate extraction on lands within the City described as Part of Lots 17 and 18, Concession 2, south of No. 2 Sideroad;

e) Burlington Council does not support issuance a Class 'A' licence to permit a quarry extracting below the water table pursuant to the Aggregate Resources Act on lands within the City described as Part of Lots 17 and 18, Concession 2, south of No. 2 Sideroad;

D. THAT consistent with Council's position on the Nelson Quarry proposal, Council adopts the following positions in respect of other approvals required by Nelson Aggregate Co. on lands south of No. 2. Sideroad:

a. Burlington Council does not support the groundwater taking or the Ontario Water Resources Act permit to take water necessary to operate the proposed Nelson Quarry;

b. Burlington Council does not support negative impacts on species listed under the Endangered Species Act, 2006 and, in the event final regulations are passed to protect such species, Council does not support any future activities respecting the proposed quarry that are inconsistent with these future regulations.

E. THAT consistent with Council's position on the Nelson Quarry proposal, Council adopts the following positions in respect of future activities at the existing Nelson Quarry on lands north of No. 2 Sideroad:

a. Burlington Council does not support any changes to the existing site plan approved under the Aggregate Resources Act that would permit processing of aggregate from off-site locations, including from lands south of No. 2 Sideroad;

b. Burlington Council does not support the issuance of a development permit under the Niagara Escarpment Planning and Development Act requested by Nelson Aggregate Co. to permit processing of aggregate from off-site
locations, including from lands south of No. 2 Sideroad, on lands within the City lands described as Part of Lots 1 and 2, Concessions 2 and 3 north of No. 2 Sideroad;

c. Burlington Council supports the expeditious final rehabilitation of the existing Nelson Quarry implemented so that the natural heritage features, hydrologic features, hydrogeologic features and habitat of species at risk on the site and on adjacent lands will be maintained or restored, and to the extent possible, improved.
**FACT SHEET**

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### NEIGHBOURHOOD MEETINGS:

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<td>November 8, 2004</td>
<td>Public information sessions held by the Joint Agency Review Team</td>
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<td>September 27, 2005</td>
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<td>February 19, 2009</td>
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A statutory public meeting on the Official Plan amendment has been precluded by an appeal of the application to the Consolidated Hearings Board.

### PUBLIC COMMENTS:

Comments received by the City as a result of the ‘Request for Comments’ circulation and to correspondence submitted to the Joint Agency Review Team have been included in this Report. Previous comments received by JART were addressed in the JART final report.

### PROCESSING TIME:

Five years:

- Pre-consultation began in 2004. A preconsultation agreement was not prepared. Development Applications were received on October 8, 2004.
- A status report to Burlington council was prepared in May 2006 (PL52-06).
- Substantive amendments to the application were made in 2006 and again in 2008.
- The applications were appealed in June 2008 and are now before the Joint Board.
- Technical review by the Joint Agency Review Team was completed in February 2009.
- A section of the Joint Agency Review Team report deals specifically with work flow and processing time.
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Executive Summary:

The Nelson Aggregate Company currently operates a 210 ha (519 acre) quarry on the north side of No. 2 Side Road on lands designated Mineral Resource Extraction Area in the City of Burlington Official Plan. The company submitted applications in October 2004 seeking an Aggregate Resource Act license as well as amendments to the Burlington Official Plan, Halton Regional Official Plan and the Niagara Escarpment Plan to allow for development of a new dolostone quarry south of its existing quarry on No 2 Side Road in Burlington.

The proposed quarry would result in a new licensed area of approximately 61 hectares within which 51.6 hectares are proposed for extraction. If approved, the extraction from the new quarry would take place over a period of approximately 15 years. Final rehabilitation of the proposed quarry to a lake is anticipated to take approximately 40 more years. As with the existing quarry, extraction is proposed below the water table. Nelson’s intent is to mine dolostone on the new quarry lands but maintain all their existing processing, weighing and stockpiling operations on the existing quarry.

As is the normal practice with aggregate applications in Halton, a Joint Agency Review Team (JART) was formed in 2004 to provide for a consolidated and streamlined technical review by various agencies. JART was chaired by the Region of Halton. Participating in the JART were staff members from the City of Burlington, Region of Halton, Conservation Halton, the Niagara Escarpment Commission, Ministry of Natural Resources and Ministry of Environment. JART also hired peer reviewers to review technical studies submitted by Nelson Aggregate.

During the JART process, Nelson amended its application twice. In June 2008 Nelson appealed its application to the Consolidated Hearings Tribunal.

JART completed its final report in February 2009. The report provided a number of technical conclusions regarding the submissions by the applicant and provides the basis for analysis of the application in this report. This report discusses issues of planning, water resources, ecology, community impacts and economic development.

Staff has conducted a review of the application and has concluded that the proposed quarry is not consistent with the Official Plan and the Provincial Policy Statement. Staff is recommending to Council that it take a position with the Joint Board that it opposes all applications before the Board and that it supports the expeditious final rehabilitation of Nelson’s existing quarry.
BACKGROUND

Reporting Background

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<td>PL 132/04</td>
<td>Update: Quarry Applications in Burlington and Vicinity</td>
<td>December 6, 2004</td>
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<tr>
<td>PL 52/06</td>
<td>Nelson Aggregate Company Application Status</td>
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Location and Sketch

**Existing Quarry**

The Nelson Aggregate Company currently operates a 210 ha (519 acre) quarry on the north side of No. 2 Side Road on lands designated Mineral Resource Extraction Area in the Official Plan.

This site has been quarried continuously since 1953 and has been operated by Nelson Aggregate Company since 1983.

**Proposed Quarry**

The lands under application are located mid block between Cedar Springs Road and Guelph Line, south of No. 2 Side Road on lands designated Escarpment Rural area and Greenlands in the Official Plan.

Approximately 83 hectares (203 acres) of land, composed of two farms and 7 residential properties, are involved in this particular application.

The attached location Plan (Sketch No. 1) identifies the location of the subject lands.

**Adjacent Land Uses**

The existing Nelson Aggregate quarry is located north of the application lands.

The Mount Nemo Settlement Area is located immediately to the east of the subject lands. The Mount Nemo Christian Nursing Home and a large woodland and wetland are located to the east.

The Camisle and Land of Legends Golf Courses and a number of rural residential properties are located to the west.

Lands to the south and southeast of the application site are used for agriculture. The Sun-Canadian Pipe Line is located south of the subject lands.
Map 1 Location Sketch of the Application

- **EXISTING QUARRY**
- **PROPOSED QUARRY**
- **OTHER LANDS OWNED BY APPLICANT**
- **MOUNT NEMO SETTLEMENT AREA**

Areas Affected: [Map]
THE APPLICATION

October 2004 - First Application

- Application to amend the Burlington Official Plan from “Agricultural Rural Area (Escarpment Plan Area)” and “Greenlands (Escarpment Plan Area)” to “Mineral Extraction Area”.
- Applications also made to amend the Niagara Escarpment Plan and the Halton Region Official Plan.
- Aggregate Resources Act application was submitted to the Ministry of Natural Resources for a Class A license.
- The proposed extraction area included most of the property identified for Mineral Resource Extraction Area re-designation.
- Excluded the West Arm of the West Branch of the Mount Nemo Tributary at the Northwest corner of the property with a 15 metre buffer.
- Proposed a groundwater injection system (recharge) along a portion of the northwest corner and along the eastern boundary as a contingency to maintain water levels in adjacent wells and wetlands, and to provide for a base flow of water into the tributary.
- Proposed to use the existing quarry north of No. 2 Side Road for crushing and stockpiling aggregate.
- Quarry site plan and technical submissions also made addressing issues such as, land use planning, hydrology, hydrogeology, the natural environment, noise, blasting, archaeology and rehabilitation.

April 2006 – Revised Application

An amendment to the quarry application was received.

- Purpose of this amended site plan as stated by Nelson was to reduce the area of proposed aggregate extraction in order to avoid some areas of significant wetland and some woodland habitat on the site.
- Amendment deleted the woodland in the southwest corner and the wetlands in the south central portion of the property from the proposed quarry area.
- Included a revised phasing plan to allow for full-scale testing of the groundwater recharge system.
- a revision to the noise barrier in the northwest corner.
- a revision to the final rehabilitation plan to include backfilling the southeast corner so that water could be passively provided to the southern wetland on completion of extraction.
- provided enhancements to amphibian habitat and shoreline wetlands.
- new tree plantings to re-instate a continuous corridor connecting to woodlots by backfilling the proposed extracted area.
January 2008 – Second Revision to Application

An amendment to the quarry application was received.

- Remove from extraction the provincially significant wetlands on the east and southeast corner, but proposing to extract the woodland and provincially significant wetlands that had been excluded in 2006.
- Elimination of the groundwater recharge system.
- Implementation of a well water protection plan including a monitoring, response action, and restoration program.
- Provision of a 30 m buffer between the proposed extraction footprint and most of the provincially significant wetlands to the east and southeast.
- A landscape and ecosystem rehabilitation plan for the area to be excluded from extraction, including eventual designation as part of Regional Official Plan Greenlands System, additional native tree plantings and re-generation.
- A management strategy for the monitoring and maintenance of Butternut Trees (a provincially designated Species at Risk).

2009 – more information

Nelson clarified at the Prehearing of the Joint Board in July that extraction at the existing quarry will be scaled back so that the existing quarry would remain open during the life of any expansion.
Area proposed for extraction:

2004 – 82.3 ha
2006 - 66.7 ha
2008 - 51.6 ha
Application Chronology

The following is a basic chronology of what has taken place since the original Nelson application was received on October 8, 2004.

1) A public information session, hosted by JART, was held on November 8, 2004 to provide information on the Nelson applications, explain the JART and the decision-making process, and identify opportunities for public input.

2) The application was deemed complete by the Ministry of Natural Resources (MNR) on January 10, 2005.

3) A second JART public information session was held on September 21, 2005 to provide an update on the JART review and obtain public input.

4) Written notice was provided to nearby landowners (within 120 metres) and a Notice of the Application was posted in the local newspaper on May 17, 2006.

5) In accordance with the Aggregate Resources Act, the applicant had two years from posting the newspaper notice to complete the requirements of the application process. In addition, a 45 day Public Notification and Consultation period was required which took place between May 17, 2006 and June 30, 2006. Public and agency written comments/objections were to be provided to the applicant and MNR by June 30, 2006.

6) In accordance with the 45-day Notification, Agencies and the public provided letters of objection regarding the application. The objections were based, for the most part, on the fact that the applications were premature while technical information and planning matters remained outstanding.

7) On June 7, 2006, Nelson held a public information session at Conservation Halton’s Administration Office.

8) On February 12, 2008, Nelson held a second public meeting to inform the public of changes made to its applications. At that time Nelson presented a revised extraction footprint, dated January 2008.

9) On March 7, 2008, Nelson provided all objectors who commented within the initial 45 day commenting period with a final 20 day notification. This notification contained information on revisions made to the application, documentation of attempts to resolve issues and a summary of unresolved objections as well as recommendations to resolve these issues. The City of Burlington and other agencies filed letters with the applicant and the MNR continuing to object to the application.

10) On April 11, 2008, Nelson concluded the aggregate Resources Act application process by submitting the final Notification and Consultation Report to MNR.

11) On June 18, 2008, Nelson filed for a hearing before the Joint Board pursuant to section 3 of the Consolidated Hearings Act.

12) On December 8, 2008, a preliminary hearing commenced where parties (10), participants (15), and presenters (6) were identified. The Joint Board was advised that the JART had yet to issue its final report. It was intended that the JART report would be produced by the start of February 2009 followed by a public information session that was scheduled for February 19, 2009. Further, following the public session, the report would then be considered by Conservation Halton in March, the City of Burlington in April, the Region of Halton in May and finally the Niagara Escarpment
Commission in June. It was intended that the agencies would have the benefit of the JART report in order to identify issues and take positions with respect to the Nelson application. The Joint Board indicated that the JART process should be allowed to be completed prior to the Hearing. On another matter, there were appeals to the Region of Halton’s Official Plan Amendment 25 (ROP A 25) by a number of aggregate producers within the Region with respect to the definition of “Significant Woodland” in Section 277 of ROPA 25. The matter was to be determined as the earlier of (i) the completion of the conformity exercise by Halton with respect to the Greenbelt Plan and the 2005 Provincial Policy Statement and (ii) any site specific applications (such as the current application by Nelson) brought forward by any of the Aggregate Appellants.

13) On February 9, 2009, the JART final report was released.

14) On February 19, 2009, a public information session was held at Kilbride School in Burlington to report on the findings of the JART report. Presentations were made with respect to the report and delegations were heard addressing the JART findings.

15) On March 3, 2009, a preliminary hearing was held by teleconference to provide a status report on the time line for the consideration of the JART Report by the public agencies. The Joint Board was advised that Nelson had requested the opportunity to file a response to the JART Report by the end of March and that Nelson wanted the agencies to have a copy of this response prior to considering the matter. The Parties agreed to the scheduling of the next Preliminary Hearing to April 24, 2009 to allow for the Nelson response to the JART Report and scheduling of agency meetings to address the application. In the matter of ROPA 25, the Joint Board was advised that the other appellants were going to withdraw their appeals. Further, it was the recommendation of Nelson and the Region that the remaining appeal in this matter by Nelson be brought into this proceeding.

16) On March 30, 2009, Nelson provided a response to the JART report. This document was presented to committee in report PL55-09

17) At the April 24, 2009 preliminary hearing, the Counsel for the City brought forward a draft motion before the Joint Board to address a number of fundamental issues of what precisely is before the Board in terms of:

1. the definition of the undertaking;
2. ensuring that all required approvals are before the Board;
3. the order of the Hearing with regard to the required approvals; and
4. clarifying what plans and policy statements are before the Joint Board.

The majority of the parties to the hearing spoke in favour of having the motion proceed and supported resolving jurisdictional issues, and the policy and planning framework at the beginning of the proceeding, rather than later on. Nelson argued with respect to the delay that would be incurred by the need to address the Motion and that matters such as the definition of the undertaking had already been determined through Ontario Regulation 96/08. Further, in Nelson’s opinion, the parties had ample time to address the need for approvals. The Joint Board, however, agreed to hearing the motion and established timelines for submissions and responses.

18) A teleconference was held on May 19, 2009 to discuss the filing of motion records by the parties and to establish dates for the Motion to be heard. Concern was expressed
by Nelson with respect to the agencies deferring their reports to their respective
boards and the delay that would result in the commencement of the hearing date itself.
It was agreed that the hearing of the motion would commence on July 16, 2009.
Further, the agencies were required to provide a revised schedule.

19) The hearing of the motion commenced on July 16, 2009 and concluded on July 20,
2009. The Joint Board upon hearing the motion and responses from the Parties set
until the end of August to bring forward a decision with respect to the Motion. A further
preliminary hearing is scheduled for December 8, 2009.

20) At the time of preparing this report (mid-October 2009) no decision on the City’s
motion by the Joint Board had been received.

Discussion of the Application

Scope of the Burlington Official Plan Amendment

The general scope of the application for an amendment to the Burlington Official Plan
has not changed since 2004 (see map 2). However changes to the area included in
the application for an Official Plan amendment have changed over time:

- The area to be extracted and the buffer areas around Greenland / Escarpment
  Natural Area designations are proposed to be designated Mineral Aggregate
  Resource Area.
- The areas of [Regional] Greenlands or [Niagara Escarpment Commission]
  Escarpment Natural Area and Escarpment Protection Area would be placed in
  Greenlands or Escarpment Protection Area designations in the Official Plan.

The delineation of Greenlands and Escarpment Protection Area is a matter that will
be addressed in the Hearing before the Joint Board.

The applications were amended by Nelson without consultation with JART and it was
unclear how or if the feedback received from the public or the agencies by the
applicant was utilized.

The Undertaking

The undertaking that is proposed by Nelson is much broader than just the lands that
have been applied for in the Aggregate Resources Act and Official Plan
amendments.

It is proposed that the existing quarry will not be rehabilitated to its final state during
extraction on lands to the south. Mining, crushing, sorting, stockpiling, asphalt
recycling and other activities will take place on the existing quarry site. The sites then
will be joined into a new integrated quarry composed of the existing two Aggregate
Resources Act license areas and the proposed new license area.
Because the existing quarry predates environmental legislation that has come into force since the licenses were issued, some of the quarry operations have been “grandfathered” under outdated legislation or old certificates of approval. Nelson has indicated that it will seek updated certificates of approval following the moving of equipment to the existing quarry floor in 2009. It is in the city’s interest to see an operation that functions under the most current environmental approvals so that the public and natural environmental are protected from potential harm.

The application material does not provide information on many of the existing approvals that are in place, how the quarries would be integrated, or whether contemporary or additional certificates of approval from the Ministry of Environment are necessary or would be sought. These questions have been raised by the City and supported by other agencies at the Joint Board. It is anticipated that the Joint Board will provide a ruling as to what the undertaking is that is being proposed. Depending on how the Joint Board rules, Nelson may need to provide additional information on how they propose to integrate the quarries and what other approvals they will require.

Rehabilitation of the Existing Quarry

Nelson has not brought forward an alternative that saw the existing quarry rehabilitated prior to complete extraction of the proposed quarry. In answer Nelson provided five reasons why the existing quarry would remain open indefinitely (source: Nelson letter to JART, June 30, 2005)

1. “As has been stated before, the majority of the resource remaining in the Burlington Quarry lies beneath our processing plants, offices and scale house. In order to extract this resource, we will have to relocate some or all of these structures. The natural choice for our processing plants is to locate them on the floor of the existing quarry. By placing the processing below grade we will have better control of the amount of noise, dust and light emissions created on site.

2. The amount of area that will be required to house the plants and stockpiles is upwards of 100 acres. This amount of space would occupy ½ of the extension lands.

3. To process the material (processing plant and stockpiles) below grade at the extension, Nelson would have to extract the site for over 15 years before a sufficient area is available after taking into account the area required for the access ramp and reservoir.

4. Processing material on the quarry floor at the Burlington Quarry maximizes the separation distance between surrounding residents and the processing area.

5. After having been in operation at this location for over 50 years, there is a certain amount of familiarity with traffic routes, for trucks hauling aggregate as well as light vehicles. We would like to continue to use our existing exit/entrance to have that continuity.”

Staff has considered the reasons that the existing quarry would remain open and final rehabilitation deferred and are of the opinion that the final rehabilitation of the existing
quarry on the north side of No. 2 should not be indefinitely delayed. This is based on a number of reasons including:

- The proposal allows the company to operate the business and earn revenue while leaving liabilities to the future. If the closure costs are larger than anticipated the company may not be able to complete the closure. This could leave the community with a large liability that would not necessarily be covered by funds from The Ontario Aggregate Resources Corporation.
- The water taking needs for an expansion are large and would take place over 40 years. Given that this is an estimate, commencing closure and final rehabilitation of the existing quarry would help establish the viability of the rehabilitation plan.
- Water taking needs during rehabilitation of a single quarry would be smaller than that necessary for two quarries.
- Nelson should propose a scaled back operation that could fit on the extension lands. This operation would have less impact on the environment and community.
- The existing quarry was able to operate for many decades with equipment above grade. A new quarry should be able to do the same and maintain separation distances between the quarry and other nearby residents and businesses.
- A new quarry and the operation of its equipment would be subject to the most up to date environmental approvals where the existing quarry may operate under old or “grandfathered” approvals.
DISCUSSION AND RECOMMENDATIONS BASED ON THE JOINT AGENCY REVIEW TEAM (JART) FINAL REPORT

In 2000 the Region of Halton established a new collaborative technical review process that brought together all the relevant agencies to review future mineral resource extraction applications. The group of agencies formed in this collaborative review process is called the Joint Agency Review Team (or JART for short).

To date, three JART processes have been completed. The first was for the Dufferin Quarry expansion in Milton, the second was for the Hanson Brick Quarry on Tremaine Road in Burlington and the third has been the Nelson Aggregate application on No. 2 Side Road.

The purpose of the JART protocol is to:

- Facilitate the sharing of information and expertise among review agencies;
- Engage the public more effectively, and;
- Improve decision-making and efficiency associated with aggregate applications.

The JART for the Nelson Aggregate application included experts from all relevant agencies, namely Conservation Halton, the Niagara Escarpment Commission, the Ministry of Natural Resources, the Region Municipality of Halton and the City of Burlington in addition to a number of peer review experts. JART was chaired by a planner from the Region of Halton.

JART members worked to review, research, discuss and analyse the proposed quarry following the original submission by Nelson. The work of the experts from various agencies comprising JART can be typified as collaborative and consensus-based. To keep the public informed JART held three separate public information centres within the community.

The final JART report was released in February 2009. The report contains a thorough review of the technical information relating to the application by Nelson. The JART final report provides the basis for the City’s analysis of the application by Nelson.

Discussion and Recommendations Based on the JART Report:

The following sections provide a discussion and analysis of a number of JART’s technical conclusions. At the end of each section are staff recommendations regarding the conclusions by JART.

JART Report: Planning and Regulatory Context

The Planning and Regulatory Context section of the JART report provides a summary of relevant legislation, planning applications necessary and reviewed the various
documents submitted by Nelson in support of the application. Issues identified by JART in this section include:

- Questions about whether First Nations consultation was undertaken
- Substantive differences of opinion with Nelson planners on conformity with:
  - the Niagara Escarpment Plan and the Niagara Escarpment Planning and Development Act,
  - the Provincial Policy Statement,
  - the Halton Region Official Plan and
  - the Burlington Official Plan

Natural Heritage

JART concluded that the general study area for the proposed quarry would best be described as a physiographic region called the Mount Nemo Plateau. The plateau (see figure 1 below) is defined generally by the Medad Valley to the west, Mount Nemo to the east, and the Escarpment Brow to the south and north. The proposed quarry is found in the centre of the Mount Nemo Plateau.

The Mount Nemo Plateau is the headwaters area for a number of creeks. The flow of water from the plateau also provides base flow to creeks originating at the base of the plateau. The water from the plateau plays a very important role in the ecology of the area. JART concluded that study of the potential impacts to all these features was necessary in order to assess the merits of the quarry application.

JART explained the two main methods of ecological evaluation in significant detail in their report. The first, Ecological Land Classification (ELC), is a standardized method used across Ontario for the identification, inventory and appraisal of woodlands, wetlands, fields and other natural and semi-natural areas. The ELC method is rigorous and yields ecological information on plants and plant communities as well as soils and soil moisture.

The second method is Wetland Evaluation which is concerned with the identification of regional or provincial significance of wetlands and wetland delineation. Both methods are necessary in properly describing the natural heritage of the lands that are proposed to be quarried.
Figure 1 The Mount Nemo Plateau
JART found problems with Nelson’s ELC records. Of particular concern was the incomplete documentation of plants and soils. JART also found that ELC mapping of the property by Nelson likely underrepresented the amount and extent of wetland communities present.

Due to property access issues Nelson was also not able to classify many of the natural areas outside of their own properties. As a result, limited primary information is available about the ecology on the plateau outside of the area proposed for extraction.

The Ministry of Natural Resources (MNR) conducted a wetland evaluation on the Mount Nemo Plateau following the submission of a wetland evaluation by the public interest group Protecting Escarpment Rural Land (PERL). The wetland evaluation by the MNR resulted in the designation of the Grindstone Creek Headwaters Wetland Complex. City staff agrees with the MNR on both the evaluation of the wetland as well as delineation of wetland units.

The designation of the Grindstone Creek Headwaters Wetland Complex as Provincially Significant has important consequences in provincial, regional and city policies. As a result, development of a quarry would not be permitted within this provincially significant wetland and development of a quarry within 120 metres must demonstrate that there would be no negative impact to the wetlands.

In its 2008 amendment to the proposed quarry plan, Nelson proposed a 30 metre buffer from many of the wetland units on the property. They also proposed extraction within some areas that are less than 30 metres from the wetland. In the southwest section of the property, Nelson has proposed to extract an area of the provincially significant wetland complex. JART concluded that these buffers to the wetland complex were inadequate and that the loss of provincially significant wetland is contrary to provincial policy. The provincial policy requires that lands within 120 metres that support the wetland must be protected. Staff agrees with JART that Nelson does not provide an acceptable rationale for a 30 metre buffer from the significant wetlands.

The Region of Halton identified approximately 65 hectares of regionally significant woodlands on and adjacent to the proposed quarry in addition to some smaller hedgerows. Much of the woodlands on the Nelson property are proposed to be removed for a new quarry. JART noted that because much of this woodland is regionally significant, the extraction as proposed would be contrary to provincial policy.

JART also completed several natural heritage sections dealing with individual species groups. Table 1 provides a summary of some of their additional key findings and conclusions.
### Table 1 Summary Findings and Conclusions by JART: Species Groups

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<th>Species Group</th>
<th>Findings of JART</th>
<th>Conclusions of JART</th>
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| Fish          | - Much of the surface flow on the subject property supports fish habitat (mostly to the east and west branches of the Mount Nemo Tributary of Grindstone Creek).  
- Under the Federal Fisheries Act, the creeks and intermittent creeks would be considered fish habitat  
- The two main potential impacts to fish habitat from the proposed quarry are:  
  1. Changes to contributing surface waters  
  2. Alterations to the groundwater table  
- Nelson is proposing a 15 metre buffer from the [west arm] creek (30 metres is required) and will eliminate flows altogether following completion of the existing quarry |
|               | Fish habitat will be impacted unless pumping is continued while the proposed quarry is filling.  
- Based on the application approval for a Harmful Alteration, Disruption or Destruction (HADD) of fish habitat will need to be authorized under the federal Fisheries Act.  
- The mitigation program will need to ensure pumping to maintain the west arm tributary. |
| Mammals       | - Mammals were inventoried through incidental observation. It is likely that some groups such as bats, mice and voles are underrepresented in the inventory done for Nelson. |
|               | JART did not provide specific conclusions addressing mammals although they noted that provincial records placed a regionally rare species of bat nearby. |
| Birds         | - JART was very interested in bird inventory work because birds are good indicators of ecosystem health and biodiversity.  
- JART initially concluded that bird inventory work was insufficient. In response more inventory work was completed in 2006. However the number of birds species inventoried remained relatively low.  
- No birds of global, national or provincial significance were identified. Some Species of Conservation Concern in this region of Ontario were identified (source: Couturier, A. 1999, Conservation Priorities for the Birds of Southern Ontario.) |
|               | JART disagreed with the conclusions of Nelson’s consultants that birds and bird habitat would not be impacted: woodlands on the site would be removed based on the 2008 extraction proposal. No study was completed on nearby lands to substantiate the statement that other habitats exist for birds in the area. JART therefore concluded that bird habitat would be lost.  
- JART concluded that species of Conservation Concern were not adequately addressed. |
| Herptiles (amphibians and reptiles) | - One reptile species and 7 amphibian species were inventoried on the property.  
- The regionally uncommon spotted salamander and the nationally and provincially threatened Jefferson Salamander have also been documented.  
- Jefferson Salamander and *Ambystoma jeffersonianum* dominated polyplloid breeding ponds in woodlands extending onto the lands of the proposed quarry. |
|               | JART disagreed with Nelson’s consultant conclusions regarding the potential habitat range of Jefferson Salamander on the property.  
- JART concluded that the habitat of Jefferson Salamander must be protected as it is provincially and nationally designated as a rare species. |
| Insects (Lepitoptera and Odonata) | - The assessment of insects yielded a number of species of rare or regionally uncommon as well as species of provincial interest  
- The key habitat areas for significant species are identified as the various small marshes on the property. |
|               | Of several species of provincial interest, the Monarch Butterfly habitat was felt to have potential for enhancement on the quarry property through preservation and enhancement. |
Species at Risk and Recovery Plans

Butternut trees and Jefferson Salamanders have been identified as Species at Risk under provincial and national endangered species legislation. As a result, JART noted that habitat of both species which are found within the application area, must be protected.

The Endangered Species Act provides for the preparation of species recovery plans containing measures for species protection and enhancement. These plans outline the ecology of the species and prescribe specific measures for species protection and enhancement.

Butternut Protection

There are thirteen Butternut trees on the property. Nine lie within the proposed extraction area. Under a provincial regulation made to implement the species recovery plan (Ontario Regulation 242/08) the Ministry of Natural Resources must determine how Butternut will be protected on the property. As part of the application Nelson has prepared a Butternut strategy for approval by the Minister of Natural Resources.

Protection for the Jefferson Salamander

JART concluded that under provincial policy the Jefferson Salamander habitat on the property must be protected. Generally speaking this habitat was identified as the two breeding ponds and the adjacent woodlands that are found on the proposed quarry property.

A draft Jefferson Salamander recovery plan was issued by the MNR in early 2009. Although issued after the JART report was completed, the recovery plan must be used as the basis for determining habitat and habitat protection requirements under the Endangered Species Act and in the matter of the application of Official Plan Amendment and the appeal before the Joint Board.

Based on the species data available from the MNR study and the ecology measures prescribed in the draft recovery plan, staff have been able to prepare a map inferring the habitat area of Jefferson Salamander (see Map 3).