



**TECHNICAL BACKGROUND REPORT**

**GIOFAM SEBRIGHT QUARRY  
CITY OF KAWARTHA LAKES**

**Skelton Brumwell**  
& ASSOCIATES INC.



Revised April 19, 2011

**TECHNICAL BACKGROUND REPORT  
GIOFAM SEBRIGHT QUARRY  
CITY OF KAWARTHA LAKES**

**P/N 05-2019**

**October 10, 2008**

**Revised April 19, 2011**

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Prepared for: Giofam Investments Inc.

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APPENDIX A

Table 1

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Draft OPA

APPENDIX C

Curriculum Vitae - Trudy P. Paterson, CET, RPP

**TECHNICAL BACKGROUND REPORT**  
**GIOFAM SEBRIGHT QUARRY**  
**CITY OF KAWARTHA LAKES**

P/N 05-2019

Revised April 8, 2011

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**1.0 INTRODUCTION**

Skelton, Brumwell & Associates Inc. was retained by Giofam Investments Inc. in October 2005 to provide planning and engineering consulting services relative to a proposed quarry in the City of Kawartha Lakes near the Community of Sebright.

Giofam Investments Inc. has owned a large tract of land located north of Monck Road, east of Sebright since 1991. These lands will be referred to as the “property”. The owner’s objective is to establish a quarry on a portion of the property to produce a specialty aggregate product used in the production of asphalt for high speed highways.

The area proposed to be licenced under the *Aggregate Resources Act* (ARA), to be referred to as the “site”, has an area of 84 hectares and is located in Part of Lots 18 through 21, Concession 4, and Lots 20 and 21, Concession 5, in the geographic Township of Dalton, formerly the County of Victoria, now in the City of Kawartha Lakes. Giofam recently purchased additional lands in part of Lots 19 and 20, Concession 2 for uses related to the quarry. The location of the site is shown on Figure 1- Location.

**2.0 BACKGROUND**

Pre-application consultation with the Ministry of Natural Resources has included introduction of the concept for the application in 2006; review of draft Natural Environment and Hydrogeology Evaluation by MNR staff in 2006 and 2007; and a site meeting on October 26, 2007. Pre-application consultation meetings were held with the City of Kawartha Lakes in March 2006 and April 2008

The applications for the Licence under the ARA, and for amendments to the Official Plan and Zoning By-law of the City of Kawartha Lakes, were submitted in October 2008. A number of technical reports and a Site Plan, prepared in accordance with the requirements of the *Planning Act* and the *Aggregate Resources Act* (ARA) were submitted to support the applications.

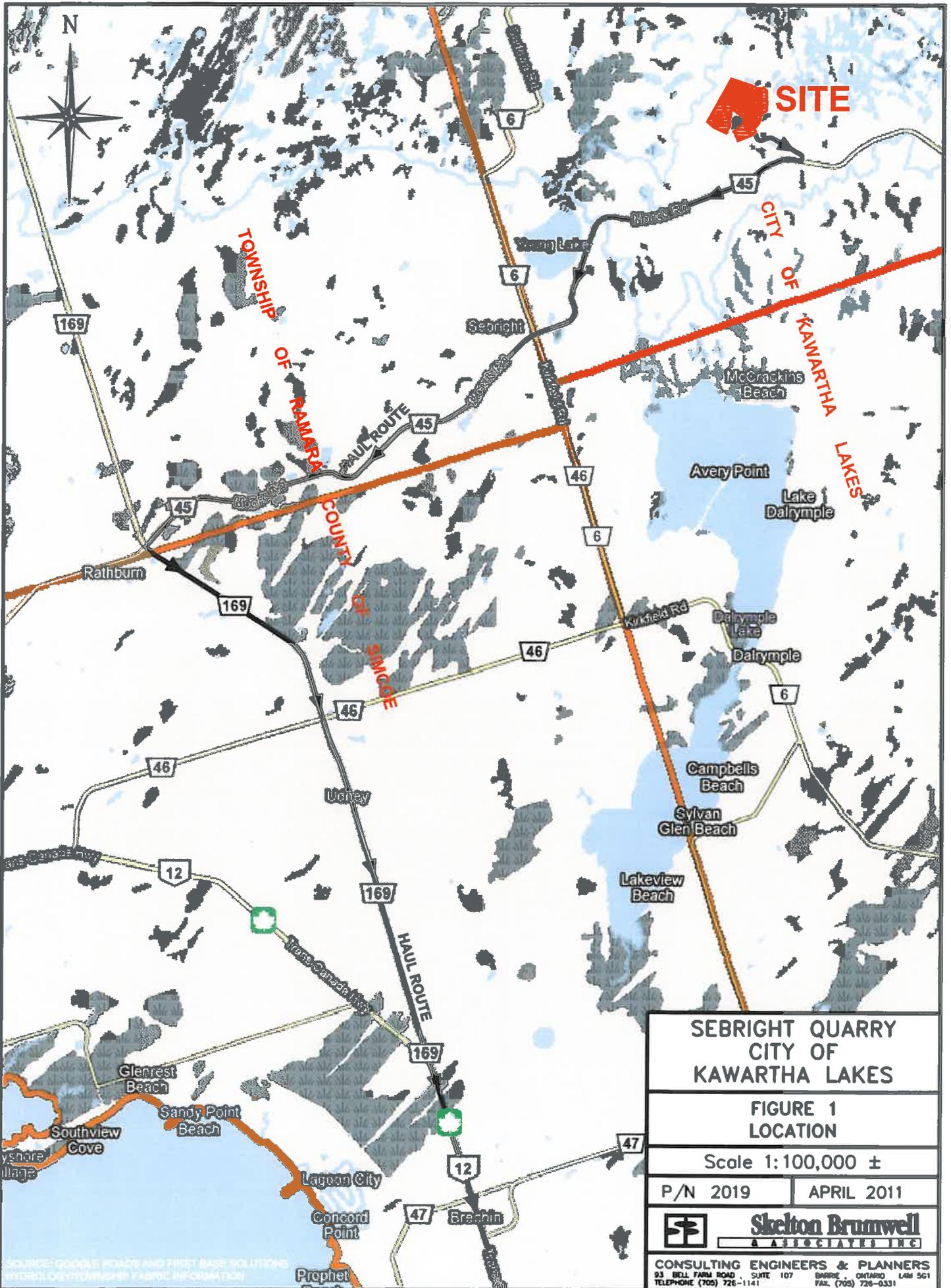
The statutory public meeting under the Planning Act was held on March 11, 2009. An information session with landowners in the immediate vicinity of the site was held on May 23, 2009.

Notification and circulation in accordance with the requirements of the ARA Application occurred between May 26, 2009 and July 10, 2009. The Public Information Session was held on June 17, 2009, and notice of the application was posted on the Environmental Bill of Rights Environmental Registry from June 8, 2009 to July 23, 2009. A total of 124 letters of objection were received by the applicant and the Ministry of Natural Resources (MNR), and comments from a number of residents and agencies were received relative to the Official Plan and zoning by-law amendments.

In June 2008, the Habitat Regulations under the Endangered Species Act came into effect. Given the potential for species at risk to be present on the site, additional field studies were commenced and a preliminary report provided to MNR July 10, 2009. Based on this preliminary report, MNR required that additional field work through a full spring/summer/fall season be completed, and an application for a Permit under the Endangered Species Act be submitted. The field work commenced in April 2010 and was completed in November 2010. The application for a Permit under the Endangered Species Act has been prepared and had an initial review by MNR staff. In due course, the application will continue through the process including posting on the Environmental Bill of Rights Registry and review by the Species at Risk Committee.

As a result of this work, significant revisions to the proposed Site Plan were required. In summary these are: reduction of the area to be extracted from 4 phases to 2 phases; relocation of the processing and stockpile area and related settling and equalization ponds within the area to be licenced; and relocation of the maintenance building, fuel storage, etc, to the area to be licenced property. In addition, the location of the access road intersection with Monck Road has been relocated as recommended by the City of Kawartha Lakes.

New or updated technical reports have been prepared based on additional field work and research, and in response to comments from the peer review and public. This report provides a summary of the technical reports and establishes the planning conformity of the amended applications and compliance with the Aggregate Resources Act.



<b>SEBRIGHT QUARRY CITY OF KAWARTHA LAKES</b>	
<b>FIGURE 1 LOCATION</b>	
Scale 1:100,000 ±	
P/N 2019	APRIL 2011
 <b>Skelton Brumwell &amp; ASSOCIATES INC.</b>	
<b>CONSULTING ENGINEERS &amp; PLANNERS</b> <small>93 BELL FARM ROAD, SUITE 107    BARRIE, ONTARIO L4M 5G1          TELEPHONE (705) 726-1141    FAX (705) 726-0331</small>	

SOURCE: GOOGLE MAPS AND FIRST BASE SOLUTIONS  
HYDROLOGY/TOWNSHIP FABRIC INFORMATION

### **3.0 APPROVAL REQUIREMENTS**

Sections 3.0 through 12.0 of the report describe the physical context of the site and the proposed operation, and identify how the results and recommendations of the studies have been incorporated into the various documents and the quarry design to address all of the relevant policy matters. Section 13.0 addresses conformity and compliance of the proposed quarry with the approval requirements. Table 1 in Appendix A provides a reference to the reports and Site Plan relative to specific policies and requirements.

#### **3.1 Aggregate Resources Act**

The ARA establishes the approval requirements for new quarries. The proposed quarry will be a Class "A", Category 2 licence that will permit extraction of up to 200,000 tonnes of aggregate material per year from above and below the water table. Applications for approval of this category of licence require the following supporting documents:

- Site Plan
- Summary Statement
- Hydrogeological Assessment
- Natural Environment Report
- Archaeological Report
- Blast Assessment.<sup>1</sup>

These requirements have been satisfied through the supporting documents provided with the application, including this report. In response to comments from the public, a Dust Management Plan was prepared and is included in the amended application materials.

Where there are no sensitive receptors, such as residences or hospitals, within 500 metres of the proposed licence boundary, a noise assessment is not required by the ARA. Given that the proposed quarry is more than 500 metres from the closest residence, no noise report has been prepared.

#### **3.2 Provincial Policy Statement**

The Provincial Policy Statement (PPS) March 1, 2005 states that, in rural areas such as the location of the subject property, permitted uses will include those related to management or use

of resources. Development that is compatible with the rural landscape and can be sustained by rural service levels is to be promoted.<sup>2</sup>

PPS promotes planning for major facilities, including resource extraction activities, and sensitive land uses so they are appropriately designed, buffered and/or separated from each other to prevent adverse effects and minimize risk to public health and safety.<sup>3</sup>

PPS requires that natural heritage features and the quality and quantity of water are to be protected, improved or restored.<sup>4</sup> Information regarding the natural heritage features and water resources on and adjacent to the site is summarized in this report and provided in detail in the “Natural Environment Level 1 and Level 2 Assessments Report, Sebright Quarry”<sup>5</sup> and the “Sebright Quarry Updated Hydrogeological Evaluation”.<sup>6</sup>

With respect to Mineral Aggregate Resources, PPS states that “as much of the mineral aggregate resources as is realistically possible shall be made available as close to markets as possible,” and that demonstration of need will not be required.<sup>7</sup> Extraction is to be undertaken such that social and environmental impacts are minimized, and rehabilitation to accommodate future uses that are compatible with surrounding and approved land use designations is realized.<sup>8</sup> These matters are addressed in Sections 4.0 through 12.0.

Significant built heritage and cultural heritage resources are to be conserved.<sup>9</sup> Section 5.0 of this report summarizes the results of the studies of the site that have been completed regarding these resources.

### **3.3 Growth Plan for the Greater Golden Horseshoe**

The Growth Plan for the Greater Golden Horseshoe (GPGGH) directs development to designated settlement areas except for development related to the management or use of resources and rural land uses that cannot be located in settlement areas.

The proposed quarry is a resource use appropriate to the rural area.

### 3.4 Official Plan

#### 3.4.1 County of Victoria Official Plan

The County of Victoria Official Plan is the current Official Plan for the City of Kawartha Lakes. The references noted below are from the Consolidation dated March 2004.

One of the goals of the Official Plan is to encourage utilization of natural resources for agriculture, forestry, aggregate extraction and recreational uses on lands best suited for the specific purpose.<sup>10</sup>

The goals and objectives of the Official Plan related to the Environment and Resource Management include:

- To enhance and protect the quality of the environment in providing for changing needs.
- To encourage development to locate on those areas which are not environmentally sensitive.
- To encourage the proper management of resources so as to minimize negative environmental impact.
- To maintain a high level of water quality for a wide range of uses.<sup>11</sup>

The site is designated Rural while the adjacent lands are designated Rural and Environmental Protection as shown on Figure 2A - County of Victoria Official Plan Designations. An amendment to the Official Plan (OPA) is required to redesignate the site as Pits and Quarries. The Pits and Quarries designation permits “quarrying and extraction of gravel, sand and other aggregates” and “crushing, screening, aggregate storage and accessory uses . . . provided that they are compatible with adjacent land uses”.<sup>12</sup>

An Environmental Evaluation is required for development proposals on or adjacent to sensitive areas as identified in the plan.<sup>13</sup> The NER for this application has been prepared and was reviewed in draft by the Ministry of Natural Resources.

A Site Plan prepared in accordance with the *Pits and Quarries Control Act* (PQCA), the predecessor of the ARA, is required for the OPA.<sup>14</sup> The Site Plan for the Sebright Quarry has been prepared as part of the application package.

Information on the nature of existing development nearby and along haulage routes may be required by Council.<sup>15</sup> The “Traffic Impact Study”, summarized in Section 8.0 of this report, identifies the volumes and potential impacts on the proposed haul routes.

Section 6.10.5 states:

“Council may pass a by-law under the Municipal Act to regulate pits and quarries that will require that no pit or quarry be operated without a letter of approval from the Council of the local municipality where PQCA in effect. ...

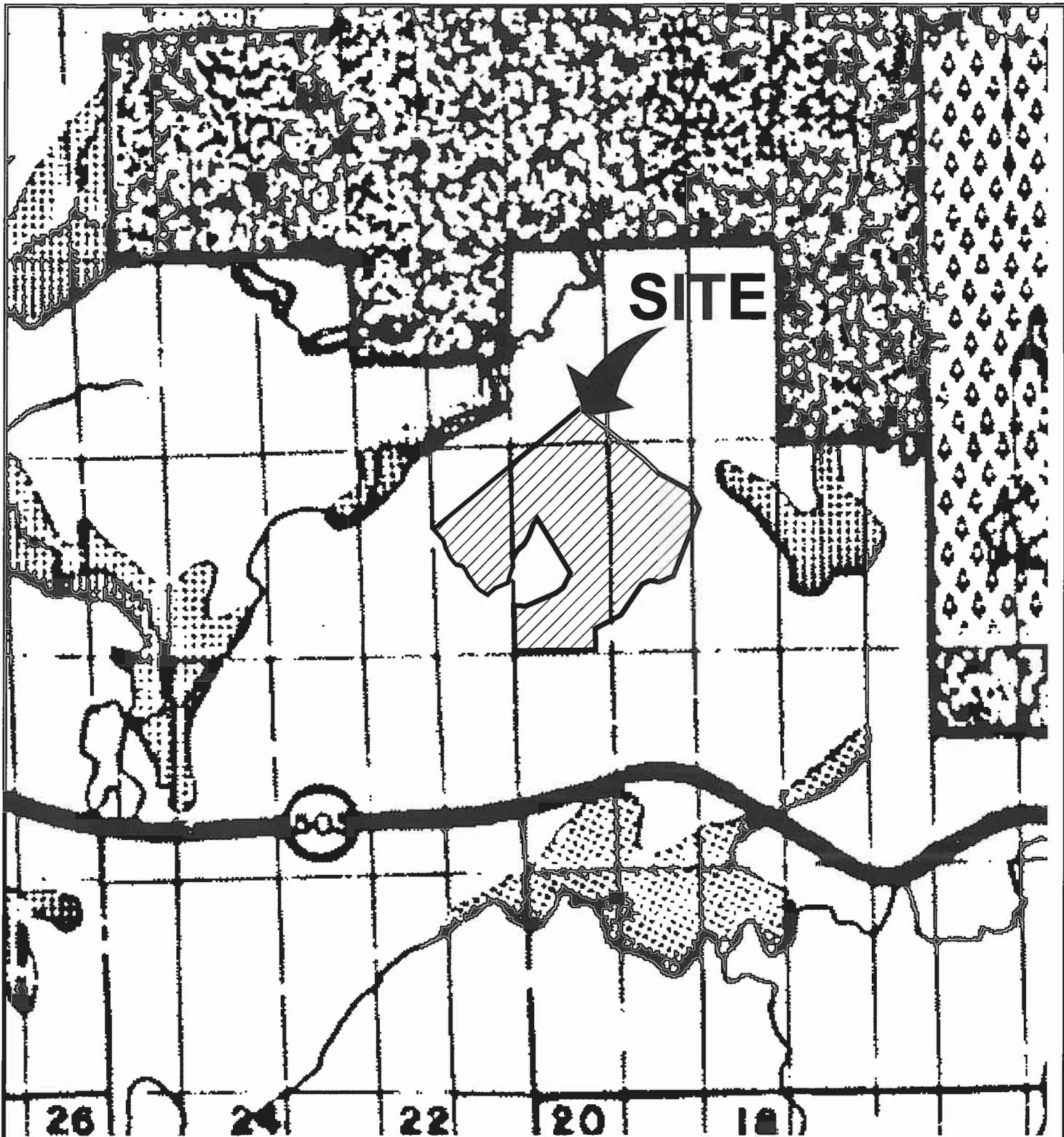
The letter will be issued only after the Council is satisfied that the proposed pit or quarry will:

- not interfere with agricultural uses
- not be exposed to public view that diminishes scenic beauty and natural amenity
- not generate unreasonable volumes of truck traffic
- comply with the MOE requirements for water supply and disposal of liquid waste
- ensure that the timing of blasting will create a minimum of disturbance
- ensure rehabilitation to a reasonable standard
- comply with MOE and MOH regarding pumping.”

Section 124. (3) of the Municipal Act, 2001 states that a by-law to regulate pits and quarries under that act does not apply in those parts of Ontario designated by a regulation under Section 5(2) of the *Aggregate Resources Act*.

The policies related to buffering of industrial uses indicate that a minimum buffer of 300 metres from the site boundary of a heavy industrial use and a sensitive land use is required, and the potential influence area is 500 metres from the site boundary.<sup>16</sup>

All of these policy matters are addressed in Sections 4.0 through 12.0 of this report, the relevant technical reports and the Site Plan.



LAND USE DESIGNATIONS	
SCHEDULE A	
	AGRICULTURAL
	GENERAL COMMERCIAL
	HIGHWAY COMMERCIAL
	HAMLET
	ENVIRONMENTAL PROTECTION
	INDUSTRIAL
	MOBILE HOME PARK
	OPEN SPACE
	PITS AND QUARRIES
	RECREATION RESERVE
	RESORT ESTATE
	RESOURCE RESERVE
	RURAL
	RURAL ESTATE
	SHOPPING CENTRE COMMERCIAL
	SHORELINE
	SPECIAL POLICY
	URBAN



Source: Schedule 'A', County of Victoria Official Plan  
March 2004, Consolidation

SEBRIGHT QUARRY CITY OF KAWARTHA LAKES	
FIGURE 2A COUNTY OF VICTORIA OP N.T.S.	
P/N 2019	APRIL 2011
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### **3.4.2 City of Kawartha Lakes Official Plan**

The City of Kawartha Lakes adopted a new Official Plan on September 21, 2010. At the time of writing this report, the new Official Plan was not approved. As shown on Figure 2B – Adopted Official Plan, Schedule A-8 designates the subject and adjacent lands “Rural” similar to the current Official Plan.

The designation which permits aggregate extraction is “Aggregate”. Permitted uses in this designation include pits and quarries licenced under the ARA, accessory uses, and “natural heritage and wildlife habitat conservation, management, rehabilitation and/or stewardship”.

Official Plan and Zoning By-law amendments are required for new or expanded operations. Applications must include the preparation of studies appropriate to the proposed operation and surrounding land uses which demonstrate that impacts are minimized, the haul route can adequately accommodate the transportation of the aggregate, and that rehabilitation will be progressive and compatible with surrounding land uses and natural heritage character.<sup>17</sup>

## **3.5 Zoning**

### **3.5.1 Township of Dalton Zoning By-law**

Former Township of Dalton By-Law 10-77 is the current zoning by-law for the subject property. As shown on Figure 3A - Current Zoning By-law, the quarry site is zoned Rural General (RG) and Environmental Protection (EP). An amendment to the zoning by-law (ZBA) is required to permit and regulate the proposed quarry. The M3 zone permits a pit but not a quarry. An exception to the M3 zone is necessary to permit a quarry with processing facilities.

### **3.5.2 City of Kawartha Lakes Zoning By-law**

A draft Zoning By-law was prepared for the City of Kawartha Lakes in July 2006. Figure 3B - Draft Zoning By-law shows the quarry site zoned RU - Rural and EP - Environmental Protection similar to the current Zoning By-law.

## **4.0 PHYSICAL CONTEXT**

### **4.1 Physiography and Topography**

The site is located near the southerly edge of the Canadian Shield physiographic region. It has topography typical to the shield with steep sided rock knobs surrounded by flat to rolling areas of exposed bedrock and wetlands. The lands immediately south of the site have Paleozoic limestone overlying the Precambrian rock.<sup>18</sup>

### **4.2 Soils and Agricultural Capability**

The Soil Survey of Victoria County has mapped the site as “Rock Land” characterized by shallow sand and rock outcrop with 10% to 25% Muck and Wendigo sand soils and classified as “non-agricultural” except for pasture.<sup>19</sup>

Part of the Giofam property and neighbouring property to the west are used for livestock grazing. Grazing will continue on the portion of the additional lands in Lots 20 and 21 not required for quarry related uses.

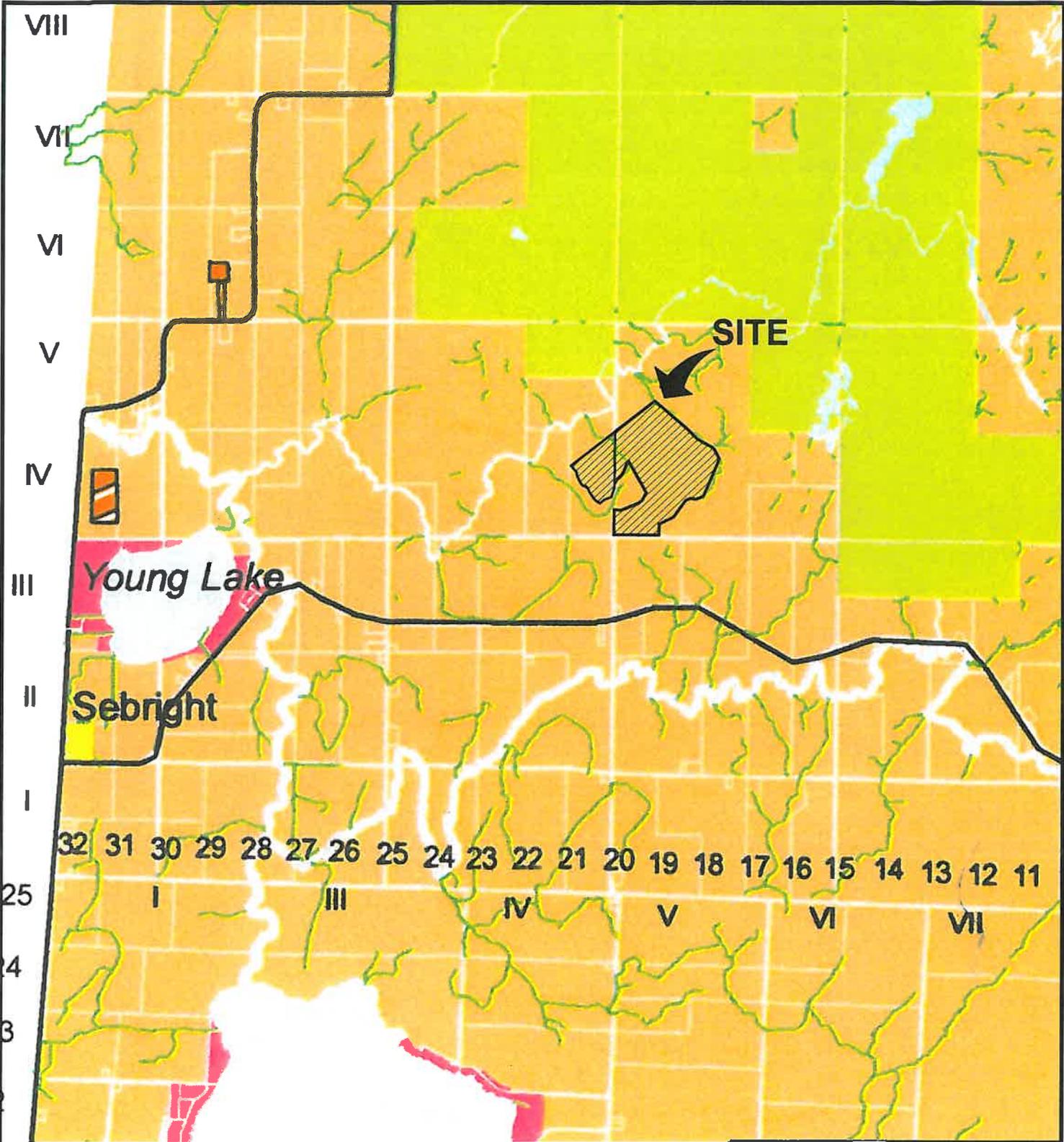
### **4.3 Location and Land Use**

As shown on Figure 1, the site is located approximately 600 metres north of Monck Road about 6 kilometres east of the community of Sebright.

The site includes two irregular areas separated by the Unopened Road Allowance between Lots 20 and 21 as shown on Figure 4 - Concept Plan. Access to the site will be along a private road through other lands owned by Giofam in Concession 2 and across the Road Allowance between Concessions 3 and 4 to the site. The access road will intersect Monck Road approximately 1.2 kilometres west of Dalrymple Road at the location recommended by staff of City of Kawartha Lakes Public Works.

The site and surrounding area are primarily vacant woodland and cleared areas with scattered rural residences and/or farm buildings. Concentrations of dwellings are located around Young Lake to the west and Lake Dalrymple to the south. As shown on Figure 4 - Concept Plan the closest residences are located to the south near Monck Road, 600 metres or more from the site. The recreational communities on Young Lake and Dalrymple Lake are approximately 2.5 and 5 kilometres respectively from the site.

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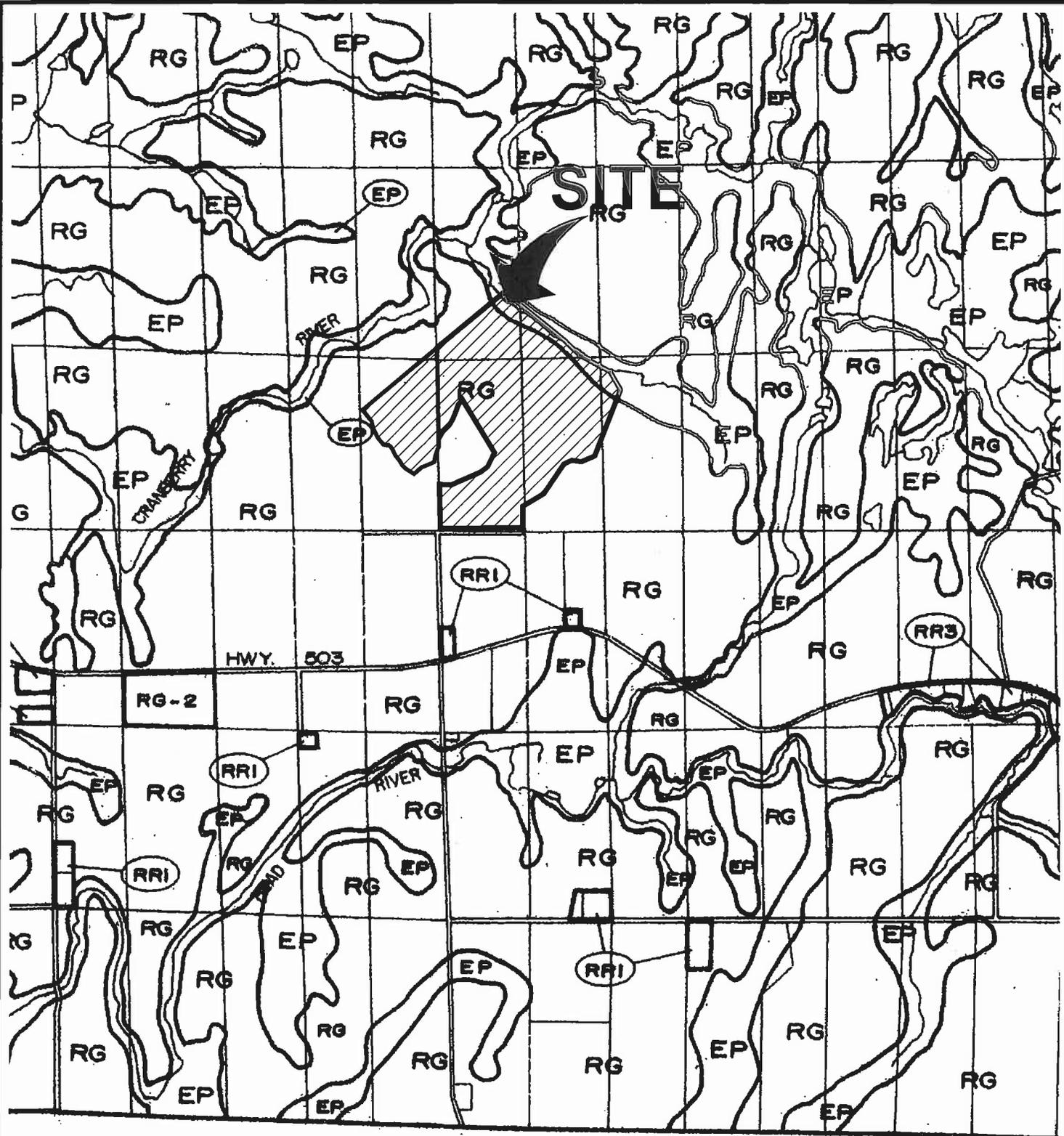
**Land Use Designations**

- Prime Agricultural
- Rural
- Environmental Protection
- Hamlet Settlement Area
- Waterfront
- Highway Commercial
- Tourist Commercial
- Aggregate
- Aggregate Resource
- Open Space
- Development Plan Area



Source: City of Kawartha Lakes  
 Official Plan Draft  
 Schedule A-8,  
 Adopted September 21, 2010

SEBRIGHT QUARRY CITY OF KAWARTHA LAKES	
FIGURE 2B DRAFT OFFICIAL PLAN	
Scale 1: 50,000±	
P/N 2019	APRIL 2011
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**ZONES**

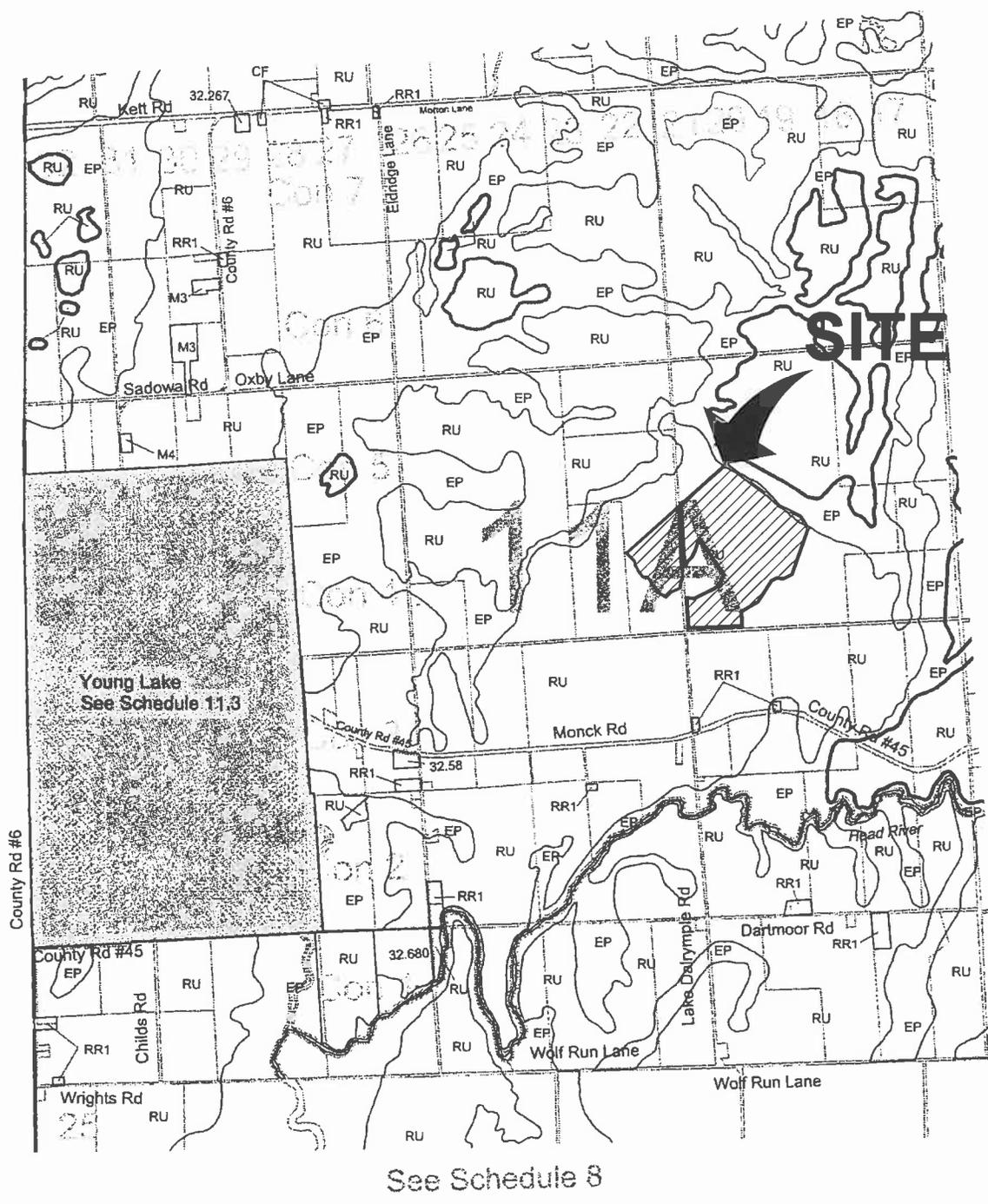
- RR1 — Rural Residential Type One Zone
- RR2 — Rural Residential Type Two Zone
- RR3 — Rural Residential Type Three Zone
- LSR — Limited Service Residential Zone
- EP — Environmental Protection Zone
- CF — Community Facility Zone
- RG — Rural General Zone
- C2 — Highway Commercial Zone
- C3 — Commercial Recreation Zone
- M2 — General Industrial Zone
- M3 — Industrial Extractive Zone
- M4 — Industrial Disposal Zone

Source: Township of Dalton, Schedule 'A',  
Zoning By-Law No. 14-922, Figure 4A  
Current Zoning By-Law



<p>SEBRIGHT QUARRY CITY OF KAWARTHA LAKES</p>	
<p>FIGURE 3A CURRENT ZONING BY-LAW</p>	
<p>Scale 1: 30,000±</p>	
<p>P/N 2019</p>	<p>APRIL 2011</p>
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Source: City of Kawartha Lakes  
Draft Zoning By-Law  
Schedule 11A, July 2006

### Legend

- EP Environment Protection
- OS Open Space
- OS1 Open Space Special Use
- A Agricultural
- RU Rural
- CF Community Facility
- AP Aggregate Protection
- RR1 Rural Residential Type One
- RR2 Rural Residential Type Two
- R1 Urban Residential Type One
- R2 Urban Residential Type Two
- R3 Urban Residential Type Three
- R4 Urban Residential Type Four
- LSR Limited Service Residential

- LSS Limited Service Seasonal
- RMH Residential Mobile Home
- C1 General Commercial
- C2 Highway Commercial
- C3 Shopping Centre Commercial
- C4 Recreation Commercial
- C5 Campground Commercial
- M1 Restricted Industrial
- M2 General Industrial
- M3 Extraction Industrial
- M4 Disposal Industrial
- (H) Holding
- 32\_ Special Provision  
(See Section 5.25.4)



**SEBRIGHT QUARRY**  
CITY OF  
**KAWARTHA LAKES**

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FIGURE 3B  
DRAFT ZONING BY-LAW

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Scale 1: 50,000±

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P/N 2019	APRIL 2011
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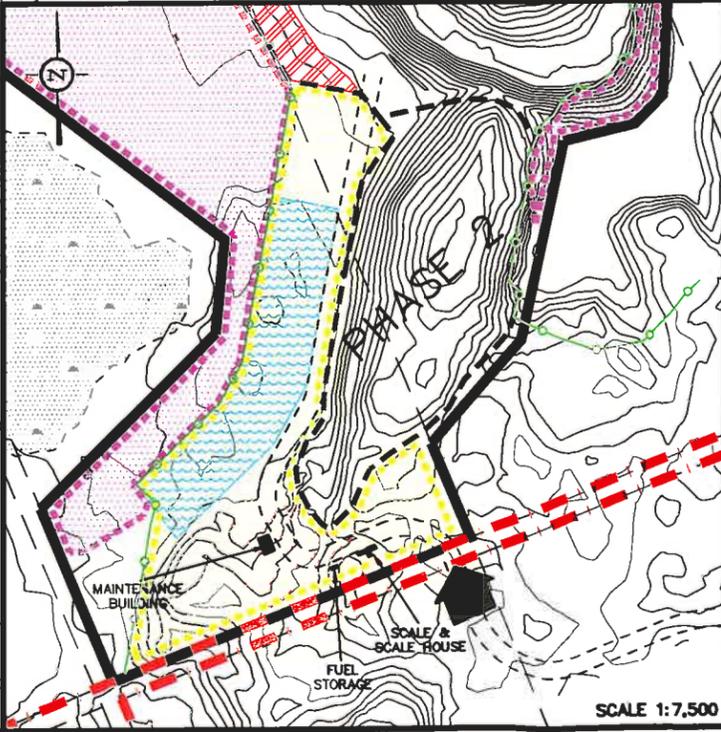
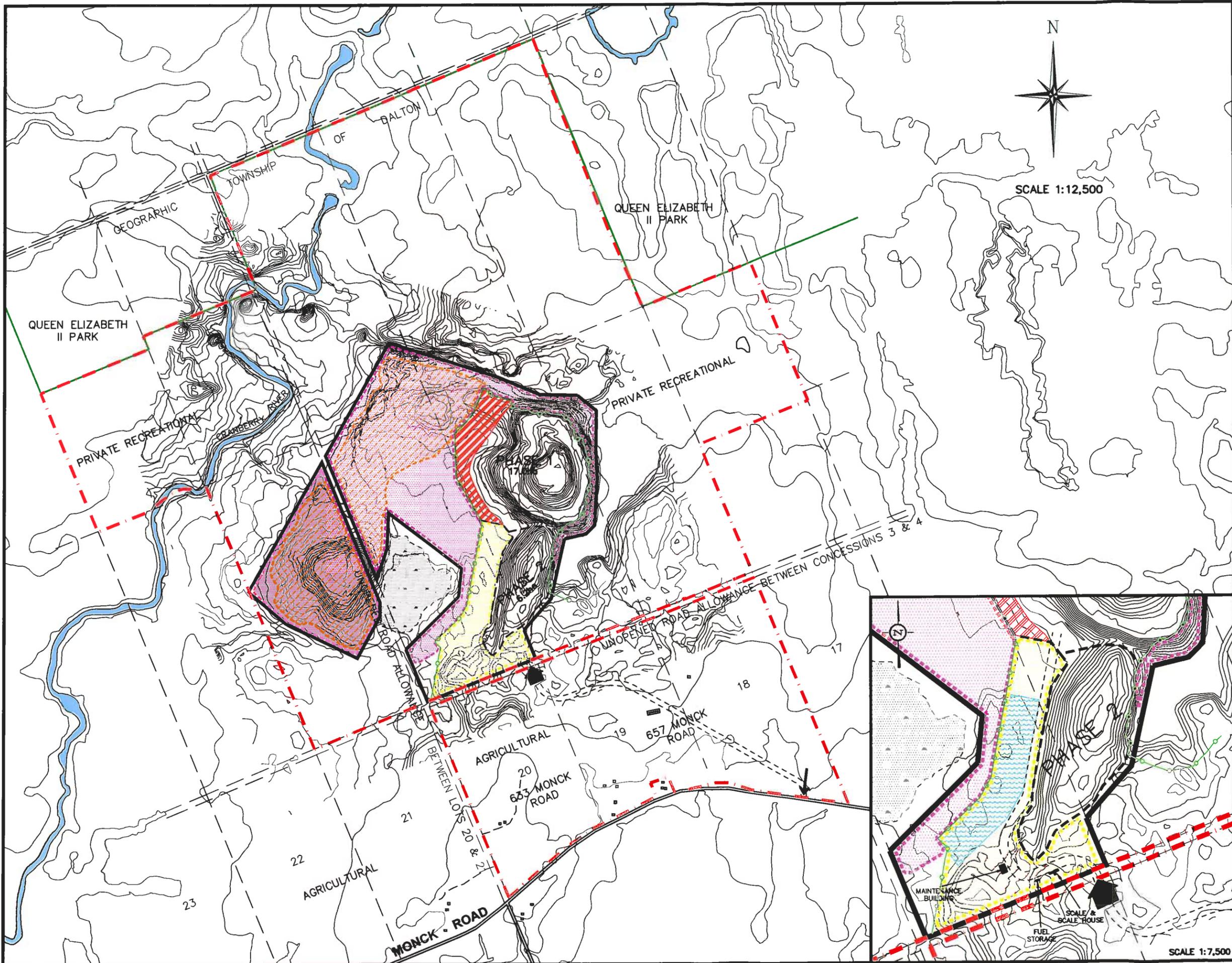
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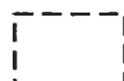
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-  BOUNDARY OF GIOFAM LANDS
-  BOUNDARY OF QUEEN ELIZABETH II PARK
-  PROPOSED QUARRY LICENCE BOUNDARY
-  PROPOSED LIMIT OF EXTRACTION
-  IDENTIFIED AGGREGATE RESOURCE
-  ENDANGERED AND THREATENED SPECIES HABITAT (NOT TO BE ALTERED)
-  ACCESS, PROCESSING AND STOCKPILE AREA
-  AREA ADDED TO PROPOSED LIMIT OF EXTRACTION
-  SETTLING AND EQUALIZATION PONDS
-  QUARRY ENTRANCE
-  BUILDINGS (NOT TO SCALE)
-  LOT/CONCESSION
-  REPTILE FENCE
-  ACCESS DRIVEWAY (APPROXIMATE ROUTE)

SEBRIGHT QUARRY  
CITY OF KAWARTHA LAKES

FIGURE 4  
REVISED CONCEPT PLAN

Scale: AS SHOWN

P/N 2019 | MARCH 2011

 **Skelton Brumwell & ASSOCIATES INC.**

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The Queen Elizabeth II Wildlands Park is adjacent to the north and easterly boundaries of the Giofam property. The boundary of the park is at minimum 400 metres from the proposed licence boundary and 470 metres from the limit of extraction.

The distances separating the site boundary from neighbouring sensitive land uses are well in excess the Official Plan requirement for a 300 metre buffer.

#### **4.4 Aggregate Resource**

The resource on the Giofam Property was investigated by Jagger Hims Limited and described in detail in the “Sebright Property Geology and Resource Assessment”. The resource identified on this site is described as relatively homogeneous, hard granitic gneiss that is capable of providing high quality asphalt aggregate. This report recommends a quarry plan with 4 phases of extraction that could produce approximately 26 million tonnes of this material.<sup>20</sup>

#### **4.5 Surface Water**

The site is located in the Cranberry River sub-watershed of the Head River watershed. The Cranberry River is located west of the site. It flows southerly joining the Head River north of Young Lake.

Most of the site drains to two tributary watercourses. One of the tributaries, identified as Watercourse 1, originates in a beaver pond at the centre of the property then flows southerly and westerly into the Cranberry River. The second tributary, identified as Watercourse 2, includes a number of beaver ponds and is located along the northerly and easterly limits of the area to be licenced. The westerly portion of the property drains directly into the Cranberry River.

Genivar (formerly Jagger Hims Limited) established six surface water monitoring stations on the Cranberry River and the watercourses adjacent to the site. On-going monitoring of surface water flow rates has occurred since 2004. Samples were collected from the monitoring stations in 2005, 2006 and 2007 and tested for 51 water quality parameters<sup>21</sup>. This monitoring provides baseline data for the Performance Monitoring Program for the quarry.

## 4.6 Ground Water

The nature of the groundwater regime of the area is described in detail in the “Updated Hydrogeological Evaluation” by Genivar which includes the monitoring information at eight locations within the site and adjacent lands between November 2003 and November 2010.

Based on this data, it is inferred that the shallow groundwater moves from the areas of higher topography to the surrounding low-lying areas. Within the site, the maximum elevation of the ground water table varies from approximately 256 metres above sea level (masl) to approximately 234 masl.<sup>22</sup>

Samples were collected from the monitoring wells annually from 2005 to 2010 and tested for water quality parameters to provide baseline data. The results of the chemical testing indicate elevated levels of aesthetic parameters in one or more wells. No health-related standards were exceeded.<sup>23</sup>

There are no Wellhead Protection Areas that extend into or are within one kilometre of the property. The majority of the wells within the regional area are developed in the Precambrian rock, with the remainder developed in the overburden or Paleozoic rock.<sup>24</sup>

A survey of accessible residential wells within 1 kilometre of the property was conducted on May 9 and June 13, 2006. All are located south and south east of the property except for one within the Giofam Property. Water samples were obtained and the test results compared to the Ontario Drinking Water Quality Standards (ODWQS). The water is naturally hard. One health related ODWQS was exceeded in one well. Some wells exceeded a one or more aesthetic ODWQS.<sup>25</sup>

## 5.0 NATURAL HERITAGE

Biologists with RiverStone Environmental Solutions Inc. have been working with Giofam Investments Inc. since October 2003 on the proposed development of a Category 2, Class A quarry near Sebright Ontario. To satisfy environmental requirements under the Aggregate Resources Act, RiverStone has prepared the Natural Environment Report: Level 1 and Level 2 Assessments, dated April 2011. A summary of their report is provided below.

- “During the field investigations conducted between 2003 and 2010, it was determined that several significant natural heritage features and functions occurred on the subject property. The features identified include species of conservation interest (fish, Endangered and Threatened species, and Special Concern species) and their associated habitat. As per the requirements of the Level 2 assessment, the potential impacts of the proposed quarry on the identified features were evaluated. The recommendations contained within this report (summarized below) are intended to mitigate the potential negative impacts on the identified features and their associated ecological functions. The key findings contained in this Natural Environment Report are as follows: The three main watercourses (Watercourses 1 and 2 and the Cranberry River) and the southern Monck Road drainage features can be protected by implementing the recommended mitigation measures. Maintaining the quality and quantity of water within the watercourses throughout the life of the quarry can be ensured by following the monitoring protocols provided in the Performance Monitoring Plan.
- The fish habitat identified on the subject property corresponds to a forage fish community in the smaller watercourses (1 and 2) and open-water portions of the online wetlands, and a warmwater fishery in the Cranberry River. Fish and fish habitat will not be affected by the proposed development provided the recommendations contained in this report are implemented (i.e., maintenance of riparian buffers, blast monitoring, control of water quality and quantity, and compliance with the federal and provincial legislation relating to fish and fish habitat).
- A considerable portion of the subject property either functions, or has the potential to function, as habitat for Endangered and Threatened species. Consequently, extensive studies were conducted to determine how the proposed quarry could be developed in a manner that would ensure the continued use of the subject property by the identified species. These studies have resulted in substantial changes to the proposed quarry. In addition to ensuring the resident populations of Endangered and Threatened species remain viable, measures to achieve an “overall benefit” for affected species have been proposed as part of a permit application under the provincial Endangered Species Act.

- With regard to those species designated Special Concern (i.e., the third level within the Species at Risk group), detailed evaluations were also completed. Based on these evaluations, it is RiverStone's conclusion that as long as the recommendations made in this report are implemented, any impacts on these species and their habitat will be acceptable given the relevant legislation and policy requirements.
- Although the subject property is directly adjacent to Queen Elizabeth II Wildlands Provincial Park, the area proposed for licensing (the Site) is approximately 400 m away from the nearest extent of the park; furthermore, the nearest proposed extraction area is a minimum of 470 m away from the park. Finally, the area between the Site and the park has been identified as Endangered and Threatened species habitat in this report; these lands are therefore subject to numerous protective measures detailed herein and within the permit application being negotiated under the provincial Endangered Species Act. Consequently, it is not anticipated that there will be any negative impacts on the ecological integrity of the park; rather this quarry proposal would ensure the maintenance of a substantial buffer (with high ecological function) adjacent to the park in this location.
- As detailed and mapped in this report, a wetland system with high natural heritage value and ecological function occurs on the subject property. None of the wetlands has been evaluated using the Ontario Wetland Evaluation System; therefore, none of them has been designated Provincially Significant (i.e., a PSW). Despite this lack of formal evaluation, the natural heritage features within this wetland system, as documented by RiverStone, indicate that the wetlands within the subject property and adjoining lands would be designated provincially significant if evaluated. Accordingly, RiverStone has evaluated potential impacts on the wetland system, and made recommendations to ensure its protection following the policy requirements that would be in effect if the wetlands were formally designated provincially significant.
- No other ecological communities recognized as being provincially or locally rare were identified on the subject property or adjoining lands.
- The final rehabilitation plan for the quarry will provide open water habitat for waterfowl. The rehabilitation plan has also been developed to include some areas of shallow habitat for aquatic, semi-aquatic, and terrestrial species via slopes and ledges. The final plan will also

preserve the surface water drainage patterns to Watercourses 1 and 2 through the careful placement of lake outlets.

- With regard to those species designated Special Concern (i.e., the third level within the Species at Risk group), detailed evaluations were also completed. Regarding the question of whether the habitat of some of these species would qualify as Significant Wildlife Habitat, and thus invoke consideration under policy 2.1.4 of the PPS, it is RiverStone's opinion that it would not, as per the methodology outlined in the most recent Natural Heritage Reference Manual (OMNR 2010). Based on these evaluations, it is RiverStone's conclusion that as long as the recommendations made in this report are implemented, any impacts on these species and their habitat will be acceptable given the relevant legislation and policy requirements.

Based on the findings presented in this Natural Environment Report, including the review of relevant environmental policy and legislation at federal, provincial, and municipal levels, RiverStone is of the opinion that the proposed quarry development plan will conform to these policies and provisions provided the recommendations contained herein are implemented. The required Official Plan and Zoning Amendments will allow for the proposed land use, while still preserving the Significant Natural Heritage Features identified on the subject property."<sup>26</sup>

All of the recommendations of the Report have been implemented on the Site Plan.

## **6.0 CULTURAL HERITAGE**

The "Stage 1 Archaeological Assessment" completed by Archaeological Assessments Ltd. concluded that there is a moderate to high potential for archaeological artifacts in some areas of the site and the adjacent lands, and recommended that a Stage 2 assessment be completed.<sup>27</sup> The "Stage 2 Archaeological Assessment" did not identify any archaeological artifacts or cultural sites within the site and recommended clearance.<sup>28</sup>

These reports were submitted to the Ministry of Culture. In correspondence dated April 14, 2008, the Ministry advised that it concurs with the recommendation of the Stage 2 report that archaeological concerns for the subject property be considered to be addressed.

## **7.0 PROPOSED QUARRY**

### **7.1 Site Plan**

The Site Plan for the proposed quarry is the most significant tool for regulating the details of the quarry operation. It includes a number of important elements such as:

- limit of licence
- limit of extraction
- sequence and phasing of the extraction operation
- mitigation and monitoring recommended in the technical reports
- progressive and final rehabilitation, etc.

The Site Plan and the quarry licence are legally binding on the pit operator. The operator must submit an annual report indicating how the operation is in compliance with the licence and Site Plan. Noncompliance can result in suspension of the licence. Figure 4 - Concept Plan illustrates the basic elements of the Site Plan. Full size copies of the Site Plan are included in the application packages submitted to MNR and the City of Kawartha Lakes.

### **7.2 Limit of Licence**

Giofam has applied to licence approximately 84 hectares of its property. The limit of the licence has been established to maximize the recovery of the specialty aggregate material and to avoid impacts on the adjacent natural heritage features in accordance with the recommendations of the “Natural Environment Report: Level 1 and Level 2 Assessments, Sebright Quarry”.

### **7.3 Limit of Extraction**

The limit of extraction shown on the Site Plan defines the maximum horizontal extent of the area where aggregate material will be extracted within the licence. The westerly portion of the site is excluded from the area to be extracted, but will be identified as a significant aggregate resource within the Licence.

For this quarry, the limit of extraction has been established to provide a buffer of a minimum of 100 metres between the active areas of the site and the habitat of endangered and threatened species. A buffer of at least 30 metres is provided between the extraction area and the adjacent wetlands to the east and north.

In all other areas a 15 metre wide setback is provided between the limit of extraction and the limit of the licence as required by the ARA. Areas within setbacks and buffers will not be disturbed except for the construction of the settling and equalization ponds, and the construction of discharge points to the adjacent water courses.

Processing, stockpiling, and transportation of materials through and from the site will occur in the extraction areas or the area immediately adjacent to Phase 2 illustrated on Figure 4, Concept Plan.

A licence for a Category 2 quarry permits extraction below the water table. It is proposed that the maximum depth of extraction will extend to an elevation of 220 masl which is 15 to 25 metres below the elevation of the surrounding lands.

The horizontal and vertical extent of extraction may be reduced if the quality of material encountered does not meet the licensee's market requirements.

#### **7.4 Entrance and Internal Haul Routes**

The entrance to the licenced area will be located at the south east corner of the site approximately 1.1 kilometres east of Dalrymple Road. One permanent internal haul road will be constructed from the entrance to Phase 1 as shown on Figure 4 - Concept Plan.

#### **7.5 Maintenance and Fuel Facilities**

The scales, scale house/office, a maintenance building and fuel storage facilities are proposed generally as shown on Figure 4 – Concept Plan. The fuel storage facilities will be installed and maintained in accordance with the requirements of the Technical Standards and Safety authority, and a Spills Contingency Plan to respond to accidental spills of fuel or other fluid from equipment on-site will be implemented for these facilities. Private water supply and sewage disposal facilities will be utilized. Recommended operational and mitigation measures will be implemented through the Site Plan.

#### **7.6 Sequence of Operations**

The extraction of the site will occur in 2 phases as identified on Figure 4 - Concept Plan. Extraction will commence at the south end of Phase 1A and proceed northerly above the water table to an elevation of approximately 242 masl. Phase 1B will follow with extraction below the

water table. Extraction of Phase 2 will follow as the previous phase is depleted, or concurrently with other phases as necessary to allow for blending of material from more than one phase. The length of time to complete extraction in any phase will depend on the market demand.

The extraction operation consists of five steps: site preparation, extraction, processing, shipping and rehabilitation.

1. Site preparation includes cutting the trees, removal of the stumps and brush, and stripping of topsoil/overburden. Stumps and brush will be stored on-site for use in rehabilitation or burned with applicable permits. The topsoil/overburden will also be stockpiled for use in rehabilitation. Site preparation will occur incrementally as the extraction operation proceeds.
2. Extraction is accomplished by drilling and blasting.
3. Processing will include crushing, screening and washing, then stockpiling of the finished product ready for transportation. During the initial extraction of Phase 1A the blasted rock will be shipped off-site for processing. Once the on-site settling and equalization ponds have been installed the processing may occur on-site.
4. Shipping includes loading of trucks and transportation to markets.
5. Rehabilitation starts when the extraction has reached the horizontal or vertical limits in any phase. Rehabilitation is described in detail below.

Some or all of these steps may be occurring simultaneously in one or more areas of the site as the quarry is developed.

## **7.7 Water Management**

### **7.7.1 Surface Runoff**

During site preparation and extraction above the grade of the surrounding lands within 30 metres of the limit of extraction, sedimentation controls will be in place to maintain the quality of runoff reaching the watercourses. Sedimentation controls will also be installed where there is insufficient natural vegetation within 30 metres of the limit of extraction to retain sediments within the limit of extraction.

Extraction of the rock knobs and dewatering will affect surface drainage patterns and therefore the volume of surface water reaching the adjacent watercourses. The “Updated Hydrogeological

Evaluation” includes a Water Management Plan that outlines how surface and groundwater flows to the watercourses will be maintained during quarry operations by pumping water collected in sumps or the equalization pond at specified rates to maintain base flow.<sup>29</sup>

Surface runoff from the extraction areas above grade and the other disturbed areas will be directed to a settling pond. Water collected in the settling pond will be re-circulated to the wash plant, used in dust control, or discharged to the equalization pond. The equalization pond will maintain acceptable surface water quality for discharge to Watercourses 1 and 2. Similarly, direct discharge from the sump in Phases 1 and 2 into the headwater of Watercourse 2 will satisfy the Provincial Water Quality Objectives (1999 and updates) or background conditions.<sup>30</sup>

Based on the similar quality of the ground and surface water, it is predicted that the diversion of water should not have a detrimental effect on the surface water quality. On a subwatershed basis, water diversion will continue to provide water to the Cranberry River, with no net change in surface water quantity or quality within the subwatershed.<sup>31</sup>

Based on the Schedules to the Draft Official Plan for the City of Kawartha Lakes, the proposed operation will be the only quarry located within the Cranberry River subwatershed. Therefore, there will be no cumulative impact on surface water resources in the subwatershed.

The “Updated Hydrogeological Evaluation” also recommends a “Performance Monitoring Program” that identifies all the monitoring requirements for the operation, and specifies “trigger mechanisms” and appropriate contingency measures. All of these recommendations, trigger mechanisms and contingency measures are identified on the Site Plan.

A Permit to Take Water (PTTW) and a Discharge Permit, under the Ontario Water Resources Act, are required for operation of the sumps, dewatering, dust control and discharge to the watercourses.<sup>32</sup>

### **7.7.2 Groundwater**

Infiltration will continue to contribute to the groundwater system beyond the extraction areas. Groundwater within approximately 50 metres of the extraction areas will be induced to move toward the quarry excavation and will be managed through dewatering as described below. South of Phase 2, there is the potential for an influence on groundwater conditions that may

extend to Monck Road. However, the potential is low as the prediction is based on findings from one borehole out of eight.<sup>33</sup>

As noted above, the proposed operation will be the only quarry located within the Cranberry River subwatershed. Therefore, there will be no cumulative impact on ground water resources in the subwatershed.

### **7.7.3 Dewatering**

Dewatering of the extraction areas will commence when extraction extends below the adjacent ground surface and/or below the groundwater table. Dewatering will remove precipitation that falls on the extraction area and groundwater that seeps into the excavation to maintain suitable (dry) working conditions within the quarry. The amount of dewatering required will vary depending on the quarry area and depth, season, weather conditions and operational requirements.<sup>34</sup> Water from the dewatering operation will be used to maintain base flow in Watercourses 1 and 2.

Dewatering is not anticipated to have any effect on groundwater elevations outside of the property boundary except potentially south of Phase 2 based on worst case conditions. There should be no negative impact on local water well supplies due to the distance between the areas of extraction and the nearest wells.<sup>35</sup>

## **7.8 Blasting**

The “Blast Impact Analysis” recommends that blasting occur in accordance with a blast design prepared by a qualified professional. All blasts will be monitored and additional monitoring will be implemented if blasting is to occur during the fish spawning period to ensure compliance with Department of Fisheries and Oceans guidelines for ground vibration and overpressure. The blast design will be continually reviewed and modified based on the monitoring results.<sup>36</sup>

The Site Plan has been designed so that blasting and extraction in the northerly phases, Phases 1A and 1B will progress from south to north. Therefore sensitive receptors to the south will be buffered from the potential impacts of overpressure propagation and flyrock by the natural topography of the lands to the south, and by additional distance. Blasting and extraction in Phases 2 will proceed from north to south so these impacts will be toward the north away from the sensitive receptors to the south.

Blasting will occur only between the hours of 8:00 a.m. and 6:00 p.m. on weekdays, with no blasting on weekends or holidays. The maximum number of blasts per week is specified on the Site Plan.

All of the recommendations of the “Blast Impact Analysis” have been included on the Site Plan.

## **7.9 Equipment**

Mobile or self-propelled equipment that may be used on-site will include scrapers, excavators, loaders, dozers, trucks and off-road trucks. Stationary equipment will include screening plant, stacker, conveyors, power plant, feed bin, crushing plant, wash plant, tool trailer and rock drills. All plants will be “portable” and will be brought on-site for periods of time. No permanent processing plants are proposed or permitted by the Site Plan.

Equipment will be refuelled at the fuel storage facility or by a mobile fuel tank. All of these operations will be in with the requirements of the Technical Safety and Standards Authority. The operator is required to have a Spills Contingency Plan in place to respond to accidental spills of fuel or other fluid from equipment on-site.

Minor maintenance of equipment will occur in the processing area. Maintenance of mobile equipment and major maintenance of processing equipment will occur off-site, or within the maintenance building when constructed.

## **8.0 REHABILITATION**

### **8.1 Progressive Rehabilitation**

The end use of the quarry will be private open space with naturalized slopes surrounding a lake. This will be achieved through progressive rehabilitation of the quarry as the extraction operation reaches the limits of extraction in each phase. Progressive rehabilitation will commence with the creation of slopes that are, on average, no steeper than 2 metres horizontal to 1 metre vertical (2:1). The slopes will be created by extracting to the 2:1 slope, by cut and fill utilizing material from the quarry face, or by back filling with rock or organic material from the site, and/or material removed from the settling pond.

Once extraction in Phase 1 and 2 has been completed, dewatering operations will cease and the excavation will fill with ground water and precipitation up to the level set by the outflow structures. It is anticipated that it will take 30 to 40 years to fill the lake.

The re-creation of diverse natural plant communities on-site will be encouraged by:

- utilizing topsoil/overburden and organic material from the site to take advantage of the native seed bank;
- creating a variety of slope configurations including gentle grades and stepped areas;
- transplanting of native species from areas being prepared for extraction;
- using native seed mixes where seeding is required to control erosion;
- creating wider terraces at the lake surface elevation in specified areas to provide access to the water's edge for wildlife and to encourage the establishment of shallow water plants once the lakes are full; and
- rehabilitation of the Access, Stockpile and Processing Area will include creating planting pods with topsoil/overburden and organic material from the site and transplanting suitable plant material from the site to the pods.

## **8.2 Final Rehabilitation**

The final rehabilitation of the site will involve removal of all equipment and stockpiles and the road between the settling and equalization pond and the lake. The remainder of the road will remain for access to the property. The final end use of the site will be private open space.

## **9.0 HAUL ROUTES AND TRAFFIC**

The Sebright Quarry will have access to Monck Road which is designated an arterial road in the County of Victoria Official Plan. Traffic from the site will travel west along Monck Road in the City of Kawartha Lakes and County Road 45 in Simcoe County to Highway 169. The Haul Route is illustrated on Figure 1 - Location.

Most of the traffic will travel south to Highway 12 and continue south to the Greater Toronto Area. However, some traffic may travel to other locations where the aggregates produced at the quarry are required for highway projects.

The "Traffic Impact Study" concluded the following.

- The proposed Sebright Quarry will generate a peak traffic volume of 71 vehicles per day or 9 vehicles per hour at the maximum licenced quarry production of 200,000 tonnes per year.
- The additional traffic represents an increase of about 7% of the projected 2012 average daily volume on Monck Road and on 3% of the project volume on County Road 45.
- Vehicles entering and leaving the quarry will primarily be trucks transporting aggregate for highway pavements and other products to the market in the GTA and elsewhere.
- Based on Ministry of Transportation Geometric Design Standards, no left turn lane is warranted at the proposed entrance and exit at Monck Road. However, Giofam has agreed to provide turning lanes.
- The stopping sight distances measured at the proposed entrance/exit are adequate for the average speed of traffic on Monck Road.
- The additional traffic generated by the quarry will have minimal impact on the haul route and will not impede traffic flow.<sup>37</sup>

## **10.0 SOCIAL IMPACT**

### **10.1 Noise**

The proposed licenced boundary of the quarry site is approximately 600 metres from the closest residence. In addition, the direction and sequence of the quarry operation have been designed to utilize the existing topography to mitigate noise and vibration impacts on the closest residences as much as possible. The hours of operation are specified on the site plan and are in conformity with the City of Kawartha Lakes Noise By-law 2005-25.

There is, at minimum, 400 metres between the proposed licenced boundary and the boundary of the Queen Elizabeth II Wildlands Park. No negative impact on users of the Park is predicted.

### **10.2 Dust**

To mitigate potential impacts due to dust, the following prescribed conditions apply to all quarry licences. The licensee must comply with these conditions to ensure the Ministry of Environment's Guidelines on Dust are met.

1. Dust will be mitigated on-site.
2. Water or another provincially approved dust suppressant will be applied to internal haul roads, and processing areas as often as required to mitigate dust.

3. Processing equipment will be equipped with dust suppressing or collection devices where the equipment creates dust and is being operated within 300 metres of a sensitive receptor.

The “Blast Impact Analysis” also recommends the use of primary and secondary dust collectors on the rock drills to minimize dust.<sup>38</sup> This recommendation is implemented on the Site Plan.

Given the above requirements and the separation distances to sensitive land uses, dust from the quarry operation is not anticipated to be an issue relative to these land uses. Dust generated by traffic along the access road to the site will be controlled using water or approved dust suppressants as necessary.

In addition, a Dust Management Plan has been prepared to assist the operator in controlling dust. This Plan has been included in the Performance Management Plan on the Site Plan.

### **10.3 Visual Impact**

The site is located at least 600 metres from the closest road, Monck Road, and 400 metres from Queen Elizabeth Park, and is screened on all sides by existing topography and tree cover within the Giofam property. Therefore, no adverse visual impact is anticipated.

## **11.0 ECONOMIC IMPACTS**

Licensing the subject property will provide needed aggregate resources for highway maintenance and construction, and will provide local employment opportunities. The property tax assessment will increase with the proposed change in zoning and land use.

The City of Kawartha Lakes will receive 7.5 cents per tonne of aggregate produced from the annual licence fee paid by the licensee. The maximum annual tonnage of 200,000 will generate \$15,000 in annual revenue which can be utilized for road maintenance at the City’s discretion.

No extension of municipal infrastructure is required for this development. The owner/licensee will be responsible for all costs of construction and maintenance of the access road.

## 12.0 MONITORING AND MITIGATION

Monitoring and mitigation measures are recommended in the “Natural Environment Level 1 and Level 2 Assessments Report, Sebright Quarry” and “Updated Hydrogeological Evaluation” to ensure that the quality of surface and ground water is maintained and that the natural heritage features adjacent to the site are protected.

The “Blast Impact Analysis” recommends that all blasts be monitored and blast designs continually reviewed and modified to ensure compliance with applicable guidelines and regulations.<sup>39</sup>

All of these recommendations are summarized in the “Performance Monitoring Plan” which also identifies the trigger mechanisms and actions to be taken to address any issues related to surface or ground water.<sup>40</sup>

### 13.0 PROPOSED AMENDMENTS

The proposed amendments to the County of Victoria Official Plan and the Township of Dalton Zoning By-law are summarized below.

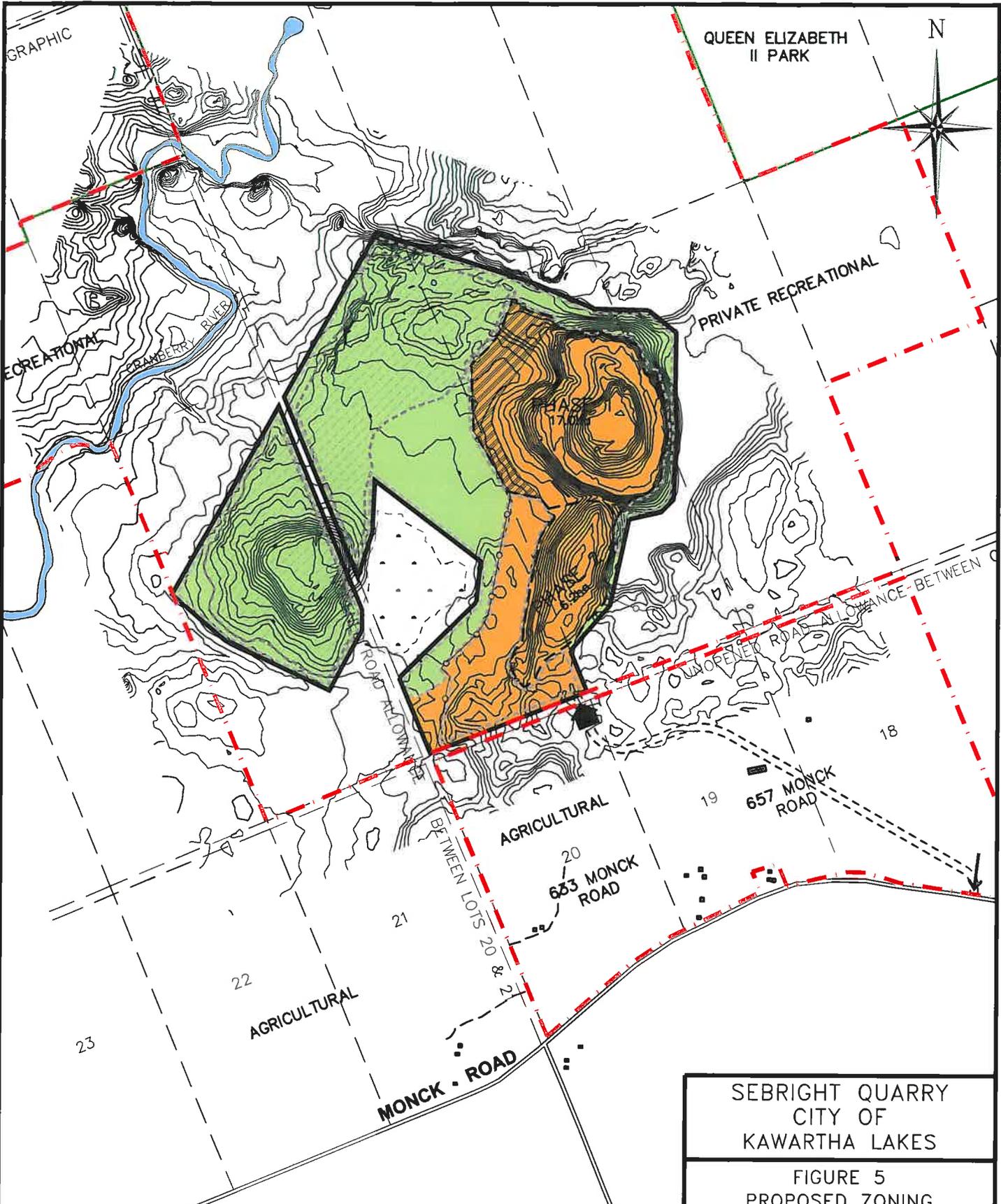
	<b>Existing Designation/Zone</b>	<b>Proposed Designation/Zone</b>	<b>Special Policy/ Provision</b>
<b>Licenced Quarry</b>			
County of Victoria Official Plan	Rural	Pits and Quarries	None
Township of Dalton Zoning By-law	RG - Rural General Zone EP - Environmental Protection Zone	M3 - <del>X</del> Extractive Industrial Exception and M3- <del>Y</del> Extractive Industrial Exception	Add quarry as a permitted use.  Restrict uses to natural heritage and wildlife habitat conservation, management, rehabilitation.

The “Pits and Quarries” designation will apply to the entire site including the area for the quarry and the significant aggregate resource that has been identified on the site. The draft Official Plan Amendment is included in Appendix B.

As shown on Figure 5 - Proposed Zoning, the amendment includes two Extractive Industrial (M3) exception zones. The first M3 exception zone will apply to the extraction phases and related access/processing/stockpile area and will permit the quarry and accessory uses. The special provision will add quarry as a permitted use in this site specific M3 zone.

The second M3 Exception zone will apply to the area shown as “Identified Aggregate Resource” and “Endangered and Threatened Species Habitat” on the Revised Concept Plan. In this zone, uses will be restricted to “natural heritage and wildlife habitat conservation, management, rehabilitation”. This is consistent with the permitted uses of the “Aggregate” designation in the new City of Kawartha Lakes Official Plan adopted by Council September 21, 2010.

Since these lands will be the subject of on-going monitoring and research relative to the Permit under the Endangered Species Act, it is appropriate that they be within the licence where mitigation and monitoring can continue under the scrutiny of MNR. The monitoring and research component will be part of the overall benefit measures proposed in the 17(2)(c) Permit application .



LANDS TO BE RE-ZONED TO THE EXTRACTIVE INDUSTRIAL EXCEPTION (M3-X) ZONE (QUARRY AND ACCESSORY USES)

LANDS TO BE RE-ZONED TO THE EXTRACTIVE INDUSTRIAL EXCEPTION (M3-Y) ZONE (NATURAL HERITAGE AND WILDLIFE CONSERVATION, MANAGEMENT, REHABILITATION AND/OR STEWARDSHIP)

SEBRIGHT QUARRY CITY OF KAWARTHA LAKES	
FIGURE 5 PROPOSED ZONING	
Scale 1:12,500	
P/N 2019	APRIL 2011
 <b>Skelton Brumwell</b> <small>&amp; ASSOCIATES INC.</small>	
<small>CONSULTING ENGINEERS &amp; PLANNERS          93 BELL FARM ROAD, SUITE 107 BARRIE, ONTARIO L4M 5G1          TELEPHONE (705) 726-1141 FAX. (705) 726-0331</small>	

SOURCE: REVISED CONCEPT PLAN MARCH, 2011.  
 SKELTON, BRUMWELL & ASSOCIATES

## **14.0 PLANNING CONFORMITY**

### **14.1 Provincial Policy Statement**

The proposed amendments to the County of Victoria Official Plan, and the Dalton Zoning By-law are consistent with the PPS in that:

- a) they will identify, protect and permit utilization of a significant aggregate resource in a location that is remote and screened from other rural uses;
- b) the use will utilize an existing arterial road and a proposed private access road, therefore no extension of municipal infrastructure is required;
- c) natural heritage features, significant wildlife habitat and the habitat of threatened and endangers species on and adjacent to the site will be protected by buffers, management of water resources and extensive monitoring;
- d) Endangered and Threatened species have been identified and measures to ensure the populations remain viable, as well as to achieve an “overall benefit” have been proposed as part of a permit application under the provincial Endangered Species Act;
- d) ground water resources will be protected through operational practices and monitoring;
- e) the quarry will make available additional aggregate resources for highway maintenance and construction;
- f) the quarry operation has been designed to implement the recommendations of the background studies to minimize social and environmental impacts;
- g) rehabilitation will restore and enhance the natural heritage features of the site in a manner that is compatible with adjacent land uses and designations; and
- h) the quarry will not have an impact on any known cultural heritage features.

### **14.2 County of Victoria Official Plan**

The proposed amendment to the County of Victoria Official Plan to permit the proposed quarry is in conformity with the Victoria Official Plan in that:

- a) it will provide for orderly and efficient utilization of a known aggregate resource located on lands that are not prime agriculture lands, do not contain sensitive environmental features, are remote from other rural land uses and are not exposed to public view;
- b) the quarry Site Plan has been designed to implement all of the recommendations of the background studies and to minimize social and environmental impacts of noise, dust and vibration due to blasting;

- c) a comprehensive plan for the management and use of water resources has been prepared and implemented by the Site Plan to maintain the natural heritage features and functions on adjacent lands;
- d) a Permit to Take Water and Certificate of Approval for Discharge will be obtained prior to any pumping on-site in accordance with the current applicable legislation and regulations;
- e) a comprehensive Performance Monitoring Plan for water quality and quantity, natural heritage impacts and blasting has been prepared and implemented by the Site Plan to ensure that any impacts on nearby land uses are addressed;
- f) existing designated haul routes will be utilized for transportation of aggregate products;
- g) the traffic generated by the operation will not have a significant impact on existing traffic patterns;
- h) the expansion will not have an impact on any known cultural heritage features; and
- i) progressive rehabilitation will be implemented through the Site Plan and the Aggregate Resources Act to provide diverse naturalized areas that complement the existing features on adjacent lands.

### **14.3 City of Kawartha Lakes Official Plan**

The proposed amendments are consistent with the City of Kawartha Lakes Official Plan as adopted September 21, 2010 in that the location of the quarry is removed from existing or planned sensitive uses, the required studies have been completed, potential impacts will be minimized through implementation of recommended mitigation, monitoring and management plans.

### **14.4 Dalton Zoning By-law**

The proposed zoning by-law amendment would implement the Official Plan amendment by rezoning the quarry site from the RG - Rural General Zone and the EP-Environmental Protection to two Extractive Industrial Exception (M3-\_\_) zones. Special provisions would add “quarry” as a permitted use in conformity with the permitted uses of the Pits and Quarries Designation for the active areas, and would restrict uses in the areas that will not be extracted. The extent of all natural heritage features on and adjacent to the site have been carefully delineated through extensive field surveys and consultation with the Ministry of Natural Resources, and will be protected through the implementation of mitigation measures on the Site Plan. Therefore, it is appropriate to amend the zoning by-law relative to lands zoned EP within this site.

## 15.0 CONCLUSIONS AND RECOMMENDATIONS

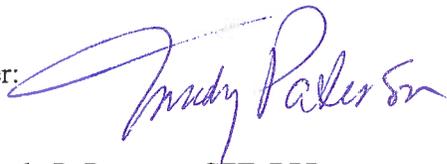
Based on the technical studies and research completed, we conclude that the proposed Quarry Licence, and Official Plan and Zoning By-Law Amendments are consistent with the Provincial Policy Statement, in conformity with the Official Plan of Victoria County and the intent of the City of Kawartha Lakes Official Plan, and comply with the requirements of the Aggregate Resources Act.<sup>41</sup>

The proposed quarry provides for utilization of a valuable aggregate resource with no negative impact on the natural heritage features and functions adjacent to the site, or nearby rural uses.

We therefore recommend approval of the applications.

All of which is respectfully submitted,  
SKELTON, BRUMWELL & ASSOCIATES INC.

per:



Trudy P. Paterson, CET, RPP  
Senior Planner

TPP/slc

## REFERENCES

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- <sup>1</sup> “Aggregate Resources of Ontario, Provincial Standards Version 1.0”, Category 2 - Class “A” Quarry Below Water, Section 2.0 Report Standards for Category 2 Applications.
- <sup>2</sup> Provincial Policy Statement, Section 1.1.4.1.
- <sup>3</sup> Ibid, Section 1.7.1.
- <sup>4</sup> Ibid, Section 2.1, 2.2.
- <sup>5</sup> RiverStone Environmental Solutions Inc., “Natural Environment Report Level 1 and 2 Assessments, Sebright Quarry”, April 2011.
- <sup>6</sup> Genivar, “Sebright Quarry - Updated Hydrogeological Evaluation, geographic Township of Dalton, City of Kawartha Lakes”, April 2011.
- <sup>7</sup> Provincial Policy Statement, Section 2.5.2.1.
- <sup>8</sup> Ibid, Section 2.5.2.2, 2.5.3.1.
- <sup>9</sup> Ibid, Section 2.6.1.
- <sup>10</sup> County of Victoria Official Plan, March 2004 Consolidation, Section 2.2.3.
- <sup>11</sup> Ibid, Section 4.4.1, 4.4.2.
- <sup>12</sup> Ibid, Section 6.10.
- <sup>13</sup> Ibid, Section 5.1.2.
- <sup>14</sup> Ibid, Section 6.10.3.
- <sup>15</sup> Ibid, Section 6.10.4.
- <sup>16</sup> Ibid, Section 5.6.2.
- <sup>17</sup> City of Kawartha Lakes Official Plan, adopted September 21, 2010, Section 21.3.
- <sup>18</sup> Ontario Geological Survey, Paleozoic Geology of the Orillia Area, Southern Ontario, Open File Map 222.
- <sup>19</sup> Gillespie, J.E. and N.R. Richards, Soil Survey of Victoria County, Report No. 25 of the Ontario Soil Survey, Canada Department of Agriculture and Food, Ottawa, and Ontario Department of Agriculture, Toronto, 1957, Guelph, Ontario, pgs 53 and 57.
- <sup>20</sup> Jagger Hims Limited, “Sebright Quarry Geology and Resource Assessment, Geographic Township of Dalton, City of Kawartha Lakes”, April 2008, page 8.
- <sup>21</sup> Genivar, “Sebright Quarry - Updated Hydrogeological Evaluation, geographic Township of Dalton, City of Kawartha Lakes”, April 2011, Tables C-1, C-2, C-3.
- <sup>22</sup> Ibid, Table B-2, Appendix B.
- <sup>23</sup> Ibid, page 11, 12.
- <sup>24</sup> Ibid, page 12.
- <sup>25</sup> Ibid, page 12, 13.
- <sup>26</sup> RiverStone Environmental Solutions Inc., “Natural Environment Report Level 1 and 2 Assessments, Sebright Quarry”, April 2011, Report Summary.

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- <sup>27</sup> Archaeological Assessments Ltd., “The Stage 1 Archaeological Assessment of the Proposed Giofam Sebright Quarry, Part of Lots 18 & 19, Concession 3, Lots 18, 19, 20 and 21, Concession 4, and Part of Lots 21 & 22, Concession 5, Geographic Township of Dalton, City of Kawartha Lakes”, April, 2006.
- <sup>28</sup> Archaeological Assessments Ltd., “The Stage 2 Archaeological Assessment of the Proposed Giofam Sebright Quarry, Part of Lots 18, 19, 20 and 21, Concession 4, and Part of Lots 21 & 22, Concession 5, Geographic Township of Dalton, City of Kawartha Lakes”, revised April 2008.
- <sup>29</sup> Genivar, “Sebright Quarry - Updated Hydrogeological Evaluation, geographic Township of Dalton, City of Kawartha Lakes”, April 2011, Section 5.
- <sup>30</sup> Ibid, Page 35.
- <sup>31</sup> Ibid., Page 38.
- <sup>32</sup> Ibid., Page 39.
- <sup>33</sup> Ibid, Page 35.
- <sup>34</sup> Ibid, Page 37.
- <sup>35</sup> Ibid, Page 36.
- <sup>36</sup> Explotech Engineering Ltd., “Blast Impact Analysis - Giofam Sebright Quarry”, March 2011, page 15.
- <sup>37</sup> Skelton, Brumwell, “Traffic Impact Study”, Page 11, 12.
- <sup>38</sup> Explotech Engineering Ltd., “Blast Impact Analysis - Giofam Sebright Quarry”, March 2008, page 15.
- <sup>39</sup> Explotech Engineering Ltd., “Blast Impact Analysis - Giofam Sebright Quarry”, March 2008, Page 15.
- <sup>40</sup> Genivar, “Sebright Quarry - Updated Hydrogeological Evaluation, geographic Township of Dalton, City of Kawartha Lakes”, Tables 19 and 20.
- <sup>41</sup> County of Victoria Official Plan, May 1999, Section 6.11.1 and 6.12.

APPENDIX A

Table 1

Policy/Requirement Reference

**TABLE 1 - Policy/Requirement Reference**

<b>Section</b>	<b>Policy/Requirement</b>	<b>Where Addressed</b>
<b><i>Aggregate Resources Act Section 12.</i></b>		
(a)	the effect of the operation of the pit or quarry on the environment;	NER, HE, TBR Section 5.0
(b)	the effect of the operation of the pit or quarry on nearby communities;	TBR Section 10.0, HE, TIS
©)	any comments provided by the municipality in which the site is located;	TBR Section 2.0, TIS
(d)	the suitability of the progressive rehabilitation and final rehabilitation plans for the site;	TBR Section 8.0
(e)	any possible effects on ground and surface water resources;	HE, TBR Section 7.7
(f)	any possible effects of the operation of the pit or quarry on agricultural resources;	TBR Section 4.2
(g)	any planning and land use considerations;	TBR Section 3.0, 14.0
(h)	the main haulage routes and proposed truck traffic to and from the site;	TBR Section 9.0, TIS
(I)	the quality and quantity of the aggregate on the site;	TBR Section 4.4
(j)	the applicant's history of compliance with this Act and the regulations, if a licence or permit has previously been issued to the applicant under the Act or a predecessor of this Act; and	TBR Section 1.0
(k)	Such other matters as are considered appropriate.	
<b>Aggregate Resources of Ontario - Provincial Standards for a Class "A" Pit Below Water (Category 2)</b>		
<b>2.1 Summary Statement</b>		
2.1.1	any planning and land use considerations;	TBR, Section 3.0, 14.0
2.1.2	the agricultural classification of the proposed site, using the Canada Land Inventory classes;	TBR, Section 4.2
2.1.3	the quality and quantity of aggregate on-site;	TBR, Section 4.4
2.1.4	the main haulage routes and proposed truck traffic to and from the site;	TBR Section 9.0, TIS
2.1.5	the progressive and final rehabilitation;	TBR, Section 8.0
<b>2.2 Technical Reports Required</b>		
2.2.1	Hydrogeological Level 1	HE
2.2.2	Hydrogeological Level 2	HE
2.2.3	Natural Environment Level 1	NER
2.2.4	Natural Environment Level 2	NER
2.2.5	Cultural Heritage Resource Stage 1	AA1
2.2.6	Cultural Heritage Resource Stage 2	AA2
2.2.7	Cultural Heritage Resource Stage 3 and 4	Not Applicable
2.2.8	Noise assessment report if extraction and/or processing facilities are within 150 m of a sensitive receptor	Not Applicable
2.2.9	A Blast Design report is required if a sensitive receptor is within 500 metres of the limit(s) of extraction to demonstrate that provincial guidelines can be satisfied; and	BIA
2.2.10	Each report shall state the qualifications and experience of the individual(s) that have prepared the report(s)	See individual Reports

TBR - Technical Background Report

NER - Natural Environment Level 1 and Level 2 Assessments, Sebright Quarry

AA1 - The Stage 1 Archaeological Assessment of the Proposed Giofam Sebright Quarry

AA2 - The Stage 2 Archaeological Assessment of the Proposed Giofam Sebright Quarry

HE – Updated Hydrogeological Evaluation

BIA - Blast Impact Assessment

TIS -Traffic Impact Study

GRA - Geology and Resource Assessment

<b>Provincial Policy Statement (PPS)</b>		
1.1.4.1 b)	Development to be appropriate for the planned or available infrastructure	TBR Section 3.2, 14.0
2.1, 2.2	Protection of natural heritage features and water.	NER, HE TBR Sections 5.0, 4.5, 4.6,
2.4.2.1	As much of the mineral aggregate resources as is realistically possible will be made available as close to markets as possible.	TBR Section 3.1
2.5.2.2	Minimize social and environmental impacts Progressive rehabilitation to accommodate subsequent land uses will be required.	TBR Sections 5.0, 10.0, 6.0, 8.0
2.5.3.1	Progressive and final rehabilitation required.	TBR Section 8.0
2.5.4.1	Prime agricultural lands to be rehabilitated.	TBR Section 3.2

<b>County of Victoria Official Plan</b>		
2 Basis		
2.2.3	Utilization of natural resources for agriculture, forestry, aggregate extraction and recreational uses will be encouraged on lands best suited for the specific purpose.	TBR Section 4.0, NER
4.4 Goals and Objectives		
Environment 4.4.1	To enhance and protect the quality of the environment in providing for changing needs.	TBR Section 5.0, NER
4.4.1.2	To encourage development to locate on those areas which are not environmentally sensitive.	TBR Section 5.0, 7.3 NER
4.4.1.3	To correct existing and prevent potential sources of pollution from occurring by applying acceptable standards as established by government agencies having competent jurisdiction.	TBR Section 7.6, HE, Site Plan
Resource Management 4.4.2	To optimize the use of the County's natural resources through management based on sound economic, social and environmental guidelines.	TBR Sections 4.4, 5.0, 9.0,10.0, 11.0, 12.0
4.4.2.2	To encourage the proper management of resources so as to minimize negative environmental impact.	TBR Section 5.0, NER
4.4.2.3	To maintain a high level of water quality for a wide range of uses.	TBR Section 4.5, 4.6, 7.7, HE
Culture and Recreation 4.4.6.2	To minimize the disruption to established communities.	TBR Section 4.3, 9.0, 10.0
4.4.6.3	To preserve and enhance the cultural and historic heritage of the County.	TBR Section 6.0
5.1 Environmental		
5.1.2	Environmental Evaluation (EE) shall be required by Council for development proposals on or adjacent to Sensitive Areas when it is determined by MNR or CA that it is necessary to assess potential impacts to and Environmentally Sensitive Area.	NER
5.1.3	The nature of the sensitivity will determine the extent of the EE, however it should be detailed enough to identify other sensitive aspects of the site.	NER
5.1.4	EE to include: - nature of the sensitive features; - anticipated impact on the natural environmental ecosystems; - an indication of the manner in which such a development could be integrated into the fabric of adjacent land uses.... - other matters deemed necessary by Council.	NER

TBR - Technical Background Report

NER - Natural Environment Level 1 and Level 2 Assessments, Sebright Quarry

AA1 - The Stage 1 Archaeological Assessment of the Proposed Giofam Sebright Quarry

AA2 - The Stage 2 Archaeological Assessment of the Proposed Giofam Sebright Quarry

HE – Updated Hydrogeological Evaluation

BIA - Blast Impact Assessment

TIS -Traffic Impact Study

GRA - Geology and Resource Assessment

<b>County of Victoria Official Plan</b>		
5.2.2.1 Aggregate	Carden, Bexley, Somerville and Verulam Townships have a bedrock with considerable potential for quarrying. Reserves are of Provincial and local significance and will be preserved and managed to ensure their best use.	TBR, GRA
5.6 Industrial Development		
Buffering 5.6.2.4	Distance separation shall be the preferred buffering technique .....	TBR Section 4.3
5.6.2.10	... The separation distance specified by Section 5.6.2.4 shall be considered absolute minimums for each industrial use category.	TBR Section 4.3, 10.0
6.10 Pits and Quarries (PQ)		
	Predominant uses in PQ will include quarrying and extraction of gravel, sand and other aggregates. Crushing, screening, aggregate storage and accessory uses shall also be considered permitted, provided that they are compatible with adjacent lands uses.	TBR Section 3.3, 10.0
6.10.2	An amendment to this plan is required for aggregate operations that are proposed in areas not designated PQ or Resource Reserve.	TBR Section 3.3.1
6.10.3	An application to amend the OP requires a Site Plan in accordance with the PQCA. This policy applies the entire Planning Area where designated or not.	Site Plan
6.10.3	Council may require information on the nature of existing development nearby and along haulage routes.	TBR Section 9.0 TIS
6.10.5	Council may pass a by-law under the Municipal Act to regulate pits and quarries that will require that no pit or quarry be operated without a letter of approval from the Council of the local municipality where PQCA in effect. The letter will be issued only after the Council is satisfied that the proposed pit or quarry will: <ul style="list-style-type: none"> <li>• not interfere with agricultural uses</li> <li>• be exposed to public view that diminishes scenic beauty and natural amenity</li> <li>• generate unreasonable volumes of truck traffic</li> <li>• comply with the MOE requirements for water supply and disposal of liquid waste</li> <li>• ensure that the timing of blasting will create a minimum of disturbance</li> <li>• ensure rehabilitation to a reasonable standard</li> <li>• comply with MOE and MOH regarding pumping (Section 6.10.5).</li> </ul>	TBR Section 4.2, 10.3  9.0 7.7  7.8  8.0 7.7
7. Transportation 7.2.1.2	County Roads should permit the movement of moderate volumes of traffic from Municipal Roads to Provincial Highways or other County Roads.	TBR Section 9.0
7.2.4	Frontage on County Roads outside of built up areas should be subject to access limitations, and a minimum road right-of-way width of 26 metres should be maintained where possible.	TIS

APPENDIX B

Draft OPA

# **DRAFT**

AMENDMENT NO. \_\_

TO THE COUNTY OF VICTORIA OFFICIAL PLAN

Reference:

Sebright Quarry

Giofam Investments Inc.

Part of Lots 18, 19, 20 and 21, Concession 4,  
and Part of Lots 19 and 20, Concession 5,  
geographic Township of Dalton, City of Kawartha Lakes.

P/N 05-2019

April 2011

# DRAFT

AMENDMENT NO. \_\_\_

County of Victoria Official Plan

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**CORPORATION OF THE CITY OF KAWARTHA LAKES**  
**BY-LAW NO. \_\_**

The Council of the Corporation of the City of Kawartha Lakes in accordance with the provisions of Sections 17 (22) of The Planning Act, R.S.O. 1990, hereby enacts as follows:

1. That attached Schedule "A" which constitutes Amendment No. \_\_ to the County of Victoria Official Plan is hereby adopted.
  
2. This By-law shall come into force and take effect on the day of the final passing thereof.

Enacted and passed this \_\_\_\_\_ day of \_\_\_\_\_ 2011.

CORPORATE SEAL  
OF THE MUNICIPALITY

Signed: \_\_\_\_\_  
Mayor

Signed: \_\_\_\_\_  
Clerk

# DRAFT

## AMENDMENT NO. \_\_ TO THE COUNTY OF VICTORIA OFFICIAL PLAN

The following Amendment to the County of Victoria Official Plan consists of three parts.

Part A - The Preamble - consists of the purpose, location and basis for the Amendment and does not constitute part of the actual Amendment.

Part B - The Amendment - which sets out the actual amendment and consists of Schedule "A" and explanatory text and constitutes Amendment No. \_\_ to the County of Victoria Official Plan.

Part C - The Appendices - consists of information pertinent to this Amendment in the form of background information. This section does not constitute part of the actual Amendment.

**PART A - THE PREAMBLE:**

**1.0 PURPOSE**

The purpose of this Official Plan Amendment is to change the designation of certain lands in the geographic Township of Dalton, City of Kawartha Lakes, from the "Rural" designation to the "Pits and Quarries" designation. The redesignation will permit the development of an 84 hectare quarry.

**2.0 LOCATION**

The subject lands are located north of Monck Road east of Sebright and are shown on Schedule "A" attached. The lands affected by this Amendment are described as in Part of Lots 18, 19, 20 and 21, Concession 4, and Part of Lots 19 and 20, Concession 5 in the geographic Township of Dalton, City of Kawartha Lakes.

**3.0 BASIS**

This amendment is based on an application and related technical studies submitted by Giofam Investments Inc. in September 2008 and revised in April 2011. The requested amendment would redesignate the subject lands to permit an aggregate extraction operation in the form of a quarry.

This application was submitted concurrently with an application to the Ministry of Natural Resources for a Class A, Category 2 Licence under the Aggregate Resources Act.

The proposed quarry development is more than 600 metres from Monck Road and the existing residential development in the area. Potential impacts of the quarry on neighbouring residents are further buffered existing vegetation and topography within other lands owned by the applicant.

Potential impacts on groundwater, surface water and natural heritage features adjacent to the site have been evaluated through studies submitted with the applications. Recommended mitigation measures have been implemented on the quarry Site Plan. Extensive monitoring of the operations identified in these studies is also implemented on the quarry Site Plan.

The proposed amendment is consistent with the Provincial Policy Statement and in conformity with the policies of the County of Victoria Official Plan.

## **PART B - THE AMENDMENT**

### **1.0 INTRODUCTION**

All of this part of the document entitled Part B - The Amendment which consists of the attached Schedule "A" constitutes Amendment No. \_\_\_\_ to the County of Victoria Official Plan.

### **2.0 DETAILS OF THE AMENDMENT**

Schedule "A" Land Use Designations to the County of Victoria Official Plan, is amended by redesignating the lands described as Part of Lots 18, 19, 20 and 21, Concession 4, and Part of Lots 19 and 20, Concession 5, geographic Township of Dalton, and identified on Schedule "A" attached from the "Rural" designation to the "Pits and Quarries" designation.

## **PART C - THE APPENDICES**

The following Appendices do not constitute part of the Amendment but are included as supporting information.

**APPENDIX 1.0**  
**MINUTES OF PUBLIC MEETING**

**APPENDIX 2.0**  
**TECHNICAL BACKGROUND REPORT**  
**REVISED APRIL 2011**

APPENDIX C

Curriculum Vitae - Trudy P. Paterson, CET, RPP



## EDUCATION

***Bachelor of Arts in Geography***

Graduated with Distinction  
York University, June 1995.

***George H. Michie Memorial Scholarship Award for Academic Excellence***

in the area of Rural Canadian Studies, November 1994.

***Diploma in Resources Engineering Technology***

Georgian College of Applied Arts & Technology, Barrie, 1976.

## PROFESSIONAL BACKGROUND

***Skelton, Brumwell & Associates Inc.***

1980 to 2003, Resource Technologist and Land Use Planner  
2004 to present, Senior Planner

Senior Planner and Senior Resources Technologist with responsibility for project coordination, subdivision and site planning, preparation of planning documents, property inventories, coordination and site plans for aggregate resources projects, litigation support, and Phase I Environmental Site Assessments.

***Ontario Ministry of Natural Resources (Midhurst)***

1976 to 1980 (full and part-time)

Technician in the Lands Branch involved in the preparation of land use maps for the District.

***Rodney C. Raikes, OLS (Barrie)***

1975 - 1979 (full and part-time)

Survey and drafting technician with responsibilities for drafting, field survey and title searching.

## MEMBERSHIP & ASSOCIATIONS

Member, Ontario Association of Certified Engineering Technicians and Technologists.

Member, Canadian Institute of Planners.



#### OTHER QUALIFICATIONS

Approved by the Minister of Natural Resources to prepare and certify Site Plans under Part II Section 8.(4) of the *Aggregate Resources Act*.

#### WORK RELATED COURSES

Introduction to Microsoft Access  
Nov. 2001, Georgian College, Barrie

Planner as a Facilitator  
April 2008, OPPI Continuing Education

Introduction to GIS  
Mar. 2003, Queen's GIS Lab, Kingston

Urban Design for Green Development Workshop  
April 2009, Geography & Program in Planning,  
University of Toronto and OPPI

Municipal Class EA Workshop  
Apr. 2003, Lakeland Planners, OPPI Central District

#### REPRESENTATIVE PROJECTS

##### *Aggregate Resources*

###### *Aggregate Permits*

Ms. Paterson has coordinated application submissions and approvals for a number of Aggregate Permits on Crown Land. These projects required integration of natural environment, hydrogeology and archaeological studies into a workable Site Plan for the extraction of aggregate resources. Consultation with local and upper tier municipalities, various branches of the Ministry of Natural Resources, First Nations, the Ministry of Northern Development, Mines and Forestry, and recreational users of Crown Land was required to obtain approvals.

###### *Kovacs Pit Expansion - Municipality of Clarington*

This project involved upper and lower tier municipal Official Plan Amendments and Municipal Zoning Amendments within the Oak Ridges Moraine Conservation Plan. Ms. Paterson was responsible for the planning, Site Plan preparation and coordination of a team of hydrogeology, noise and natural heritage consultants to obtain Planning Act and Aggregate Resources Act approvals. She also provided planning evidence at an Ontario Municipal Board hearing which led to licensing under the Aggregate Resources Act.

###### *Varcoe Pit Expansion - Township of Springwater*

Successful management of concurrent application processes under the Planning Act and the Aggregate Resources Act resulted in the major expansion of a gravel pit. Extensive public consultation and negotiation were key to the resolution of issues, and Municipal and Ministry of Natural Resources Approval without an Ontario Municipal Hearing.



**KEY PROJECTS cont'd**

***Municipal Planning***

***Severn Park- Township of Severn***

The members of Severn Falls Chapel have a goal to provide affordable housing for retirees in the community of Severn Falls. In 2009, Skelton, Brumwell coordinated the submission of a zoning by-law amendment application to permit the proposed use. The application was denied by the Township and appealed to the Ontario Municipal Board by the proponent. Ms. Paterson provided planning evidence at the hearing that contributed to the Board's decision to allow the appeal.

***Planning Justification Report - The Town of Blue Mountains***

In 2005 The Town of the Blue Mountains retained Skelton, Brumwell & Associates Inc. to prepare a Planning Justification Report relative to the land use designations for the Swiss Meadows area in OPA No. 4 to the Town's adopted Official Plan.

***Barrie Hydro Substations and Property Inventory***

Ms Paterson was responsible for the coordination of these projects. The first project included the preparation of site plans, obtaining relevant approvals, and administering the construction of three municipal substations in the City of Barrie. The second project was the preparation of a property database, including recommendations relative to planning matters, relative to over 40 municipal substations sites in the City and other municipalities.

***Lind Condominium - Township of West Grey***

This project involved the conversion of an historic mill located on the Rocky Saugeen River into a recreational residence. Required approvals included an Official Plan Amendment to the Grey County Official Plan, a Zoning By-law Amendment, a Draft Plan of Condominium Approval and Conservation Authority Approval related to the flood line and fish habitat. Coordination of a team including Skelton Brumwell staff, a fisheries biologist, the project architect, and clients' lawyer was required for successful completion of the project.

***Woodland Park Subdivision - Town of Innisfil***

Retained by the Town of Innisfil in 2002, Ms Paterson completed the review of applications for a Draft Plan of Subdivision and Zoning By-law Amendment for a 244 unit urban subdivision in the Alcona Secondary Plan. Issues arising from the review included natural heritage features, housing mix and urban design. Ms Paterson appeared at the Ontario Municipal Board on behalf of the Town relative to the application, and worked with the proponents and the Town to prepare Conditions of Draft Plan Approval.