

Rockridge Quarry

Applications for Official Plan and Zoning Bylaw Amendment,
Municipality of Trent Lakes, County of Peterborough

PLANNING ANALYSIS REPORT

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1.0 INTRODUCTION

The following report has been prepared to address, in part, the complete application requirements of the Planning Act regarding a proposal to establish a quarry on Lot 21, Concession 8, in the former Township of Harvey, Municipality of Trent Lakes. A corresponding Aggregate Resources Act Application has been submitted to the Ministry of Natural Resources and Forestry, for a Class 'A', Category 4 License (quarry above water). The required approvals are summarized in Table 1. The project is referred to as the **"Rockridge Quarry"**. The site is located on the east side of County Rd. 36, just north of Flynn's Corners, approximately 6.5 km north of Buckhorn. A location map is provided in Figure 1.

TABLE 1: REQUIRED APPROVALS

Application	Approval Authority
• Municipality of Trent Lakes Official Plan Amendment to designate the subject lands as Extractive Industrial	County of Peterborough
• Municipality of Trent Lakes Zoning By-law Amendment to re-zone the subject lands from (A) Agricultural to (M3) Extractive Industrial Zone	Municipality of Trent Lakes
• Aggregate Resources Act (ARA) Category '4' License (Class 'A' quarry above the water table)	Ministry of Natural Resources and Forestry (MNRF)

A series of technical reports have been prepared to support the applications noted above. These technical reports, and their recommendations, have been considered in the preparation of this Planning Report. For ease of reference, these technical reports and plans include the following:

- **"Natural Environment Technical Report: Level I & II"** prepared by Niblett Environmental
- **"Hydrogeologic Assessment"** prepared by WSP Group
- **"Noise Impact Study"** prepared by Valcoustics Canada Ltd.
- **"Blast Impact Study"** prepared by Explotech Engineering Ltd.
- **"Summary Statement"** prepared by WSP Group
- **"Aggregate Resources Act Site Plans"** prepared by Harrington McAvan Ltd.
- **"Archaeological Assessment"** prepared by WSP Group

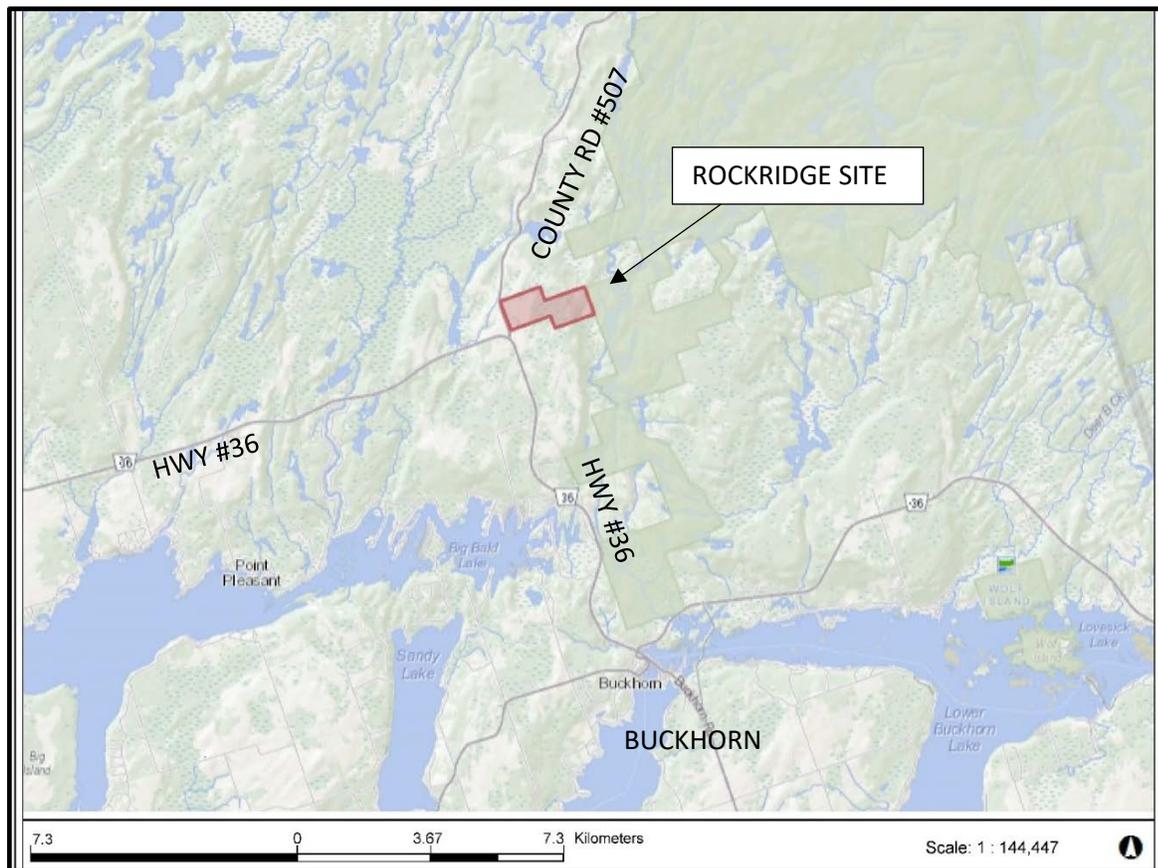
2.0 SUBJECT PROPERTY AND ADJACENT LAND USES

2.1 Property Location, Ownership and Description

The proposed Rockridge Quarry is located on County Rd 36, just north of Flynn's corners, approximately 6.5 km north of Buckhorn. The subject lands consist of Lot 21, Concession 8, in the former Township of Harvey, together with the road allowance between Lots 20 and 21, which was recently closed and ownership transferred to 2329059 Ontario Ltd.

The property consists of cleared agricultural land with various roadways and paths throughout. There are 3 existing buildings located on the property, each with a separate driveway entrance to the road. Portions of the property remain forested with some active forest management activities being carried out. The east limit of the property is the Mississauga River. Marsh areas associated with the banks of the Mississauga River extend to the eastern boundaries of the property.

FIGURE 1: SITE LOCATION



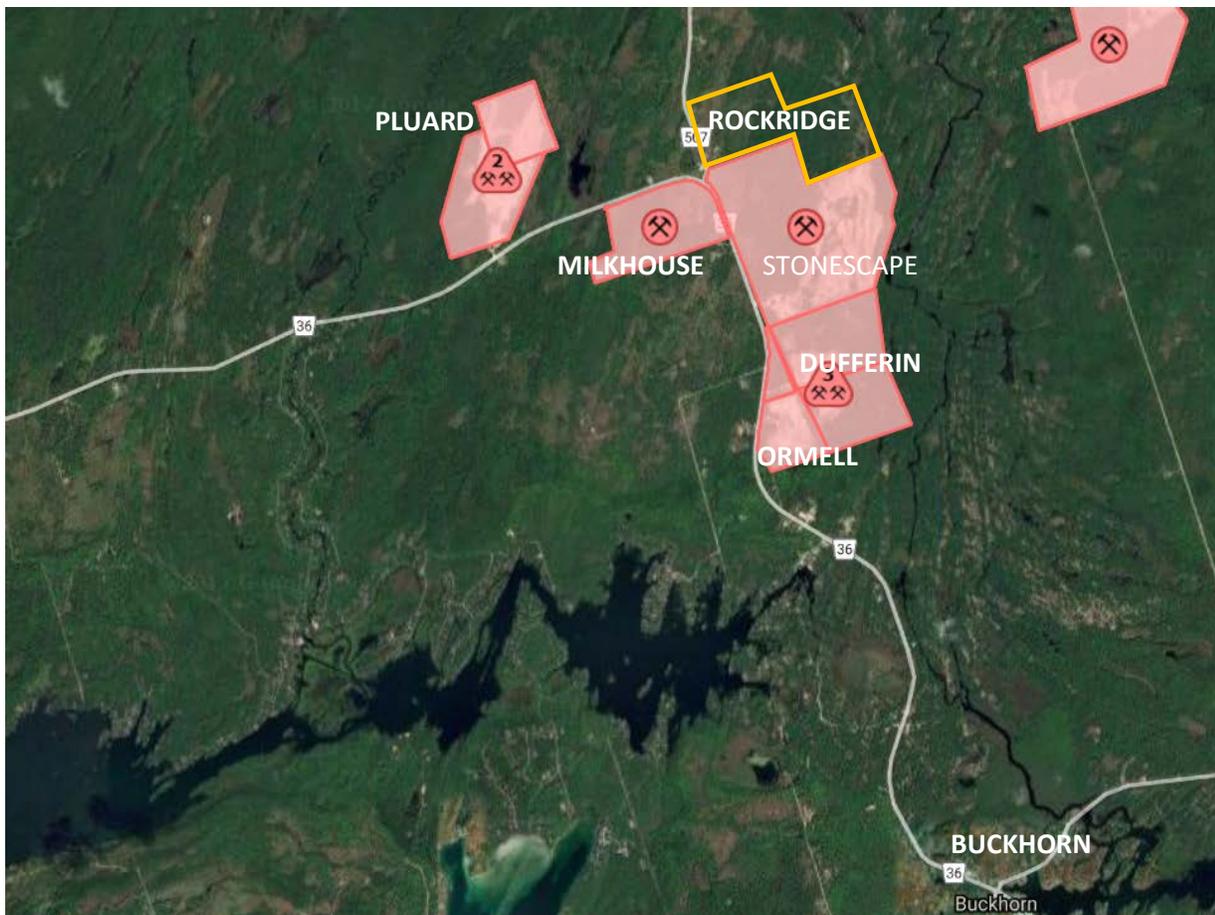
2.2 Surrounding Land Uses

The surrounding lands are mainly in rural, agricultural and extractive industrial uses. There is a service station located at the intersection of County Rd. #36 and C.R. #507, just across from the southern portion of the site.

There are several existing licensed quarries located near the site. The Stonescape Quarry is located immediately adjacent to the south, and the Milkhouse Quarry is located to the south, on the west side of County Rd 36. There are other licensed quarries in the area as shown on Figure 2

Other adjacent land uses include agricultural, rural residential, and commercial (gas station across the road).

FIGURE 2: LICENSED QUARRIES



3.0 DESCRIPTION OF THE PROPOSAL

The proposal would permit the establishment of a quarry on the subject property. The proposed licence is for an area of 98.5 hectares (236 acres), with extraction proposed on a portion (81ha) of the subject lands. The balance of the licensed area, includes a woodland, small wetland and setbacks which are not proposed for extraction.

The Site is largely undeveloped land, containing areas of open field, low-lying shrubs and woodland. Topography, from west to east, is mainly flat with the exception of a defined, stepped, limestone escarpment situated along the east. The Site currently contains two existing single-family rental dwellings that are owned by the Applicant, a vacant commercial/administration building, and lands under lease to accommodate a Bell telecommunications tower. Surrounding land-uses include: rural residential to the west across County Road 507, vacant land to the north, a gasoline station and convenience store to the west, an existing quarry (Stonescape Quarry) abutting the Site to the south, and the Kawartha Highlands Provincial Park (and Mississauga River valley) to the east. Milkhouse Quarry is located southwest of the Site, on the opposite side of Highway 36.

The quarry operations would consist of two general product categories: dimension stone for general landscaping purposes; and aggregates for construction use. Removal of dimension stone will be conducted by mechanical means, but may also employ occasional low-intensity blasting in order to loosen rock faces. The extraction of construction aggregates will require drilling, blasting, crushing and possibly washing of the crushed material to create various marketable commodities. All processes are subject to securing approvals and permits under Provincial regulations.

Extraction will not extend within 2 metres of the high water table. Portable processing equipment for washing, screening, crushing and recycling will be used on the site. Other equipment to be used in the operation of the quarry may include trucks, loaders, excavators, bulldozers, and conveyors. Temporary stockpiles may be located near the quarry face.

The proposed annual tonnage limit is 1,500,000 tonnes. The actual extraction rate will depend on market demand during any given year.

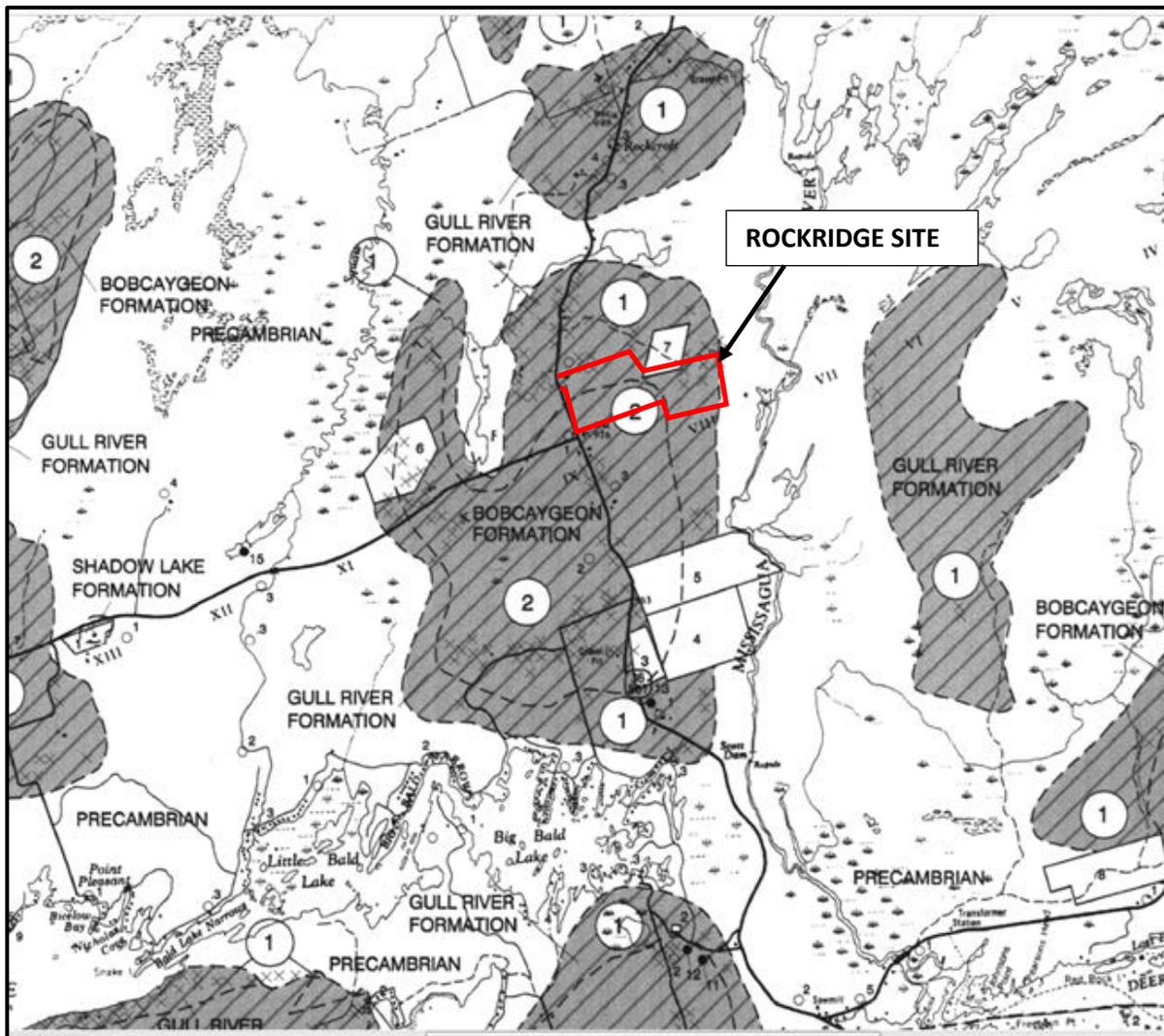
Rehabilitation will be undertaken progressively, with the final land use plan to restore the extracted area to open space use with a mix of meadow, forest, and rock barren, and talus slope features. The rehabilitation plan has been designed to enhance habitat for wildlife and species at risk in this area.

3.1 Aggregate Resource

The proposed area to be licensed and zoned for extraction is identified in the Aggregate Resources Inventory Paper (ARIP) #132 for Harvey Township, within an area of “Selected Bedrock Resources”.

The results of the geotechnical investigations completed by the applicant and WSP show that the Site is underlain by limestone of the Bobcaygeon and Gull River Formations to a depth of approximately 20 m below ground surface, underlain by Shadow Lake Formation (approximately 6 m thick), and subsequently Precambrian metamorphosed bedrock material. Unit depths and thickness are consistent with the geology at the adjacent Stonescape and Milkhouse Quarries.

FIGURE 3: ARIP MAPPING



The deposit is suitable for both dimension (landscaping) stone production as well as for construction aggregate. Geotechnical investigations have confirmed that the resources on the Rockridge site are high quality, and are suitable for production of concrete and asphalt aggregates. The construction aggregates from other local quarries are used to supply local construction needs in the Peterborough County area, as well as the markets in Durham Region and Northumberland County. In addition to suitability of the deposit for high quality construction aggregates, the resource is also suitable for high quality landscaping and dimension stone, which can be produced from selected quarry levels. The landscaping stone from

other local quarries in the area is currently used in demand in markets throughout Ontario, Quebec, the Maritimes and the Northern United States.

3.2 Operations and Phasing

The operation of the site will be phased, with extraction commencing in the eastern part of the property and the direction of mining is generally from east to west.

Temporary berms will be constructed along the perimeter to store stripped topsoil and/or overburden for future rehabilitation of the site. These temporary berms will protect nearby residences from noise impacts from the aggregate operation. These acoustic berms are designed to comply with the Ministry of Environment guidelines and reflect the technical recommendations of the Noise Impact Study prepared by Valcoustics Engineering.

Aggregate processing operations and shipping will only occur during daytime hours (7am to 5pm) and processing of material on this property will be done in designated areas as shown on the site plans. Fencing will be upgraded to meet the requirements of the Aggregate Resources Act along the site boundaries to prevent inadvertent access into the property.

The site plans have incorporated the technical recommendations from all the reports to minimize any negative impacts on the adjacent land uses from the proposed quarry.

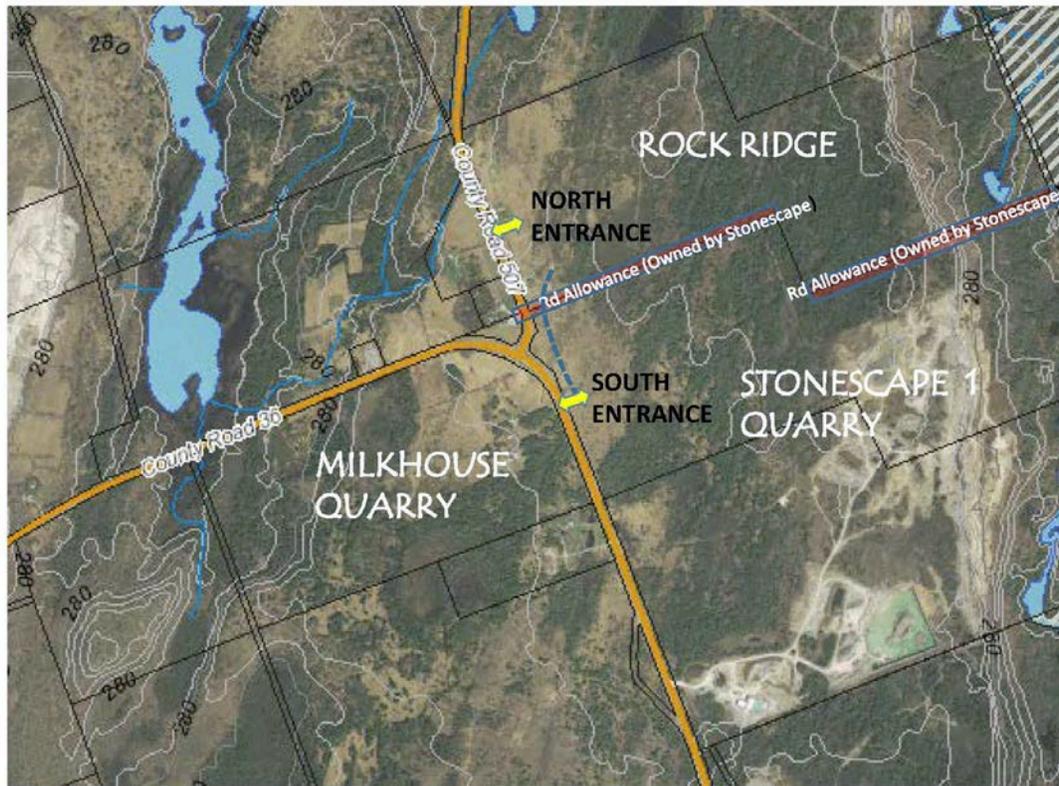
3.3 Haul Route

The aggregate resource from the site will be utilized locally to supply materials for construction of roads, homes, and other developments in the area. Materials will be transported from the site by truck to supply local construction projects.

The traffic study examined two potential options for access to the quarry. The first, a north access option that would provide direct access to County Road (CR) 507 just north the intersection with CR 36 at Flynn's Corners. The second option would be a direct access to CR 36 south of the intersection of CR 36 and CR 507. Each access option will provide direct access to a County Road. Trucks will utilize the County Road network to deliver product. Some of this traffic will connect to the Provincial Highway network including Highway 28 and Highway 7. The traffic study concluded that available sight distances at the two proposed entrance options for the new quarry meet/exceed current County standards.

The site has been designed with two access locations, as shown on Figure 4.

FIGURE 4: ROCKRIDGE QUARRY ENTRANCE LOCATIONS



3.4 Rehabilitation

In accordance with the requirements of the Provincial Policy Statement, 2014 and the Aggregate Resources Act Provincial Standards, the rehabilitation of the extracted lands will occur in a progressive manner, with the rehabilitation following the removal of the aggregate material as closely as is feasible.

Rehabilitation of the site will include reforestation, rock barren, and open field areas. A detailed overview of the rehabilitation scheme is provided in the Rehabilitation Plan and summarized in the ARA Summary Statement prepared by Harrington McAvan.

All existing topsoil and overburden on site will be stripped and stockpiled separately in berms or stockpiles and replaced as quickly as possible in the progressive rehabilitation process. Berms/stockpiles will be constructed on the perimeter of the site to attenuate noise and/or visual screening and will be used for rehabilitation of the site.

The final rehabilitation will be compatible with the surrounding lands and land use, and is designed to enhance the existing natural features on and adjacent to the site.

3.5 Background Reports and Site Plans

The Site Plans form the basis of the quarry license application under the Aggregate Resources Act and also form an integral part of the review process of the applications to amend the Municipality's Official Plan and Zoning By-law. The Site Plans are labelled as follows:

- i) Existing Features (Drawing 1);
- ii) Operational Plan and Phasing (Drawing 2 and 3);
- iv) Sections and Details (Drawing 4); and,
- v) Rehabilitation Plans (Drawing 5).

The Site Plans were prepared taking into consideration the requirements of the Aggregate Resources Act, the County of Peterborough Official Plan, the Municipality of Trent Lakes Official Plan and the Provincial Policy Statements, as well as the recommendations of the following expert consultants retained to review the proposal:

- Hydrogeology: WSP Group
- Natural Environment: Niblett Environmental
- Archaeological Assessment: WSP Group
- Noise: Valcoustics Engineering
- Traffic Impact Assessment: Tranplan Associates
- Resource Assessment: WSP Group and Applicant

4.0 LAND USE PLANNING ANALYSIS

The following is an assessment of the proposed Rockridge Quarry application in the context of the policies and provisions of the following documents:

- Planning Act
- Provincial Policy Statement 2014 (PPS)
- Growth Plan for the Greater Golden Horseshoe, 2006
- County of Peterborough Official Plan
- Township of Trent Lakes Official Plan
- Township of Trent Lakes Zoning Bylaw

The subject lands fall within the Planning jurisdiction of the County of Peterborough Official Plan and the Township of Trent Lakes Official Plan. This report evaluates the proposed land use within the context of both Official Plans, as well as within the context of Provincial legislation including the Planning Act and the Provincial Policy Statement (2014).

The protection and management of aggregate resources has been deemed to be of provincial significance and their development is regulated by specific legislation. In addition to the Aggregate Resources Act (ARA), the development of aggregate extraction operations must respect the provisions of the Planning Act and give appropriate consideration to the policy framework established by the regional and municipal planning documents.

4.1 Planning Act

When carrying out its responsibilities under the Planning Act, a municipality or any other authority which affects a planning matter must have regard for the provincial interests as identified in Section 2 of the Planning Act.

The provincial interests contained in Section 2 of the Planning Act are outlined in the table below. The Rockridge Quarry proposal has been evaluated in the context of these prescribed provincial interests:

Table 2: Planning Act, Section 2 Evaluation

	Provincial Interests	Rockridge Quarry Proposal
2(a)	<i>The protection of ecological systems, including natural areas, features and functions.</i>	<p>The Natural Environmental Level 1 screening and technical evaluation prepared by Niblett Environmental identified the following natural areas and features within the area to be licensed or within 120 metres of the subject property:</p> <ul style="list-style-type: none"> - Habitat for Species at Risk - Significant Wildlife Areas <p>The proposed extraction operations and associated development activities for the Rockridge Quarry application have been assessed for impacts on the natural environment. Potential negative impacts have been mitigated through setbacks and buffer zone measures with an operational constraint zone to maintain and demonstrate no negative impacts to the sites significant features and associated ecological functions. Much of</p>

		the post-extraction landscape will be rehabilitated to open space and pasture lands, with enhancement of areas to sustain wildlife corridors and habitat for species at risk.
2(c)	<i>The conservation and management of natural resources and the mineral resource base.</i>	Aggregate resources are a provincial interest and should be protected from incompatible land uses and developed responsibly. The proposed quarry will provide a high quality supply of mineral aggregate material to the local and regional markets.
2(d)	<i>The conservation of features of significant architectural, cultural, historical, archaeological or scientific interest.</i>	Archaeological activities were carried out in accordance with the Standards and Guidelines for Consultant Archaeologists (Ministry of Tourism, Culture and Sport 2011), and are documented in the report prepared by WSP Canada Ltd. No artifacts or features of cultural heritage value or interest (CHVI) were encountered during Stage 2 Archaeological Assessment.
2(e)	<i>The supply, efficient use and conservation of energy and water</i>	Ground and surface water features have been studied and documented. Mitigation measures included on the Operations Plan such as, groundwater level monitoring and restriction of surface activities will minimize the potential for groundwater disturbance or contamination in accordance with provincial guidelines.
2(k)	<i>The adequate provision of employment opportunities.</i>	The proposed quarry will result in the creation of employment opportunities locally. These primary resource jobs present a multiplier effect which can result in the creation of additional supplemental service jobs in the Township and the County.
2(l)	<i>The protection of the financial and economic well-being of the Province and its municipalities.</i>	In addition to the employment opportunities created by the proposed quarry operation, the Township and the County will see an increase in revenue through increased assessment and annual tonnage contributions as well as an additional source of aggregate to contribute to competition in the market.
2(m)	<i>The coordination of planning activities of public bodies.</i>	The interests of public bodies and agencies are considered by the circulation requirements of the Planning Act and the ARA.
2(n)	<i>The resolution of planning conflicts involving public and private interests.</i>	The land use planning process, as well as the ARA licensing process, enables municipalities, agencies and the public to participate in the evaluation of this proposal.
2(o)	<i>The protection of public health and safety.</i>	The operational plan prepared by Harrington McAvan contains a variety of mitigation measures which have been developed to minimize the social impact of the proposed quarry operation. The requirements of the Operation Plan and site plan notes therein are legally binding as per the ARA.
2(p)	<i>The appropriate location of growth and development.</i>	Rural areas are prime location for the development of this non-renewable resource. On- site investigation has confirmed the quality and extent of this resource.

4.2 Provincial Policy Statement (PPS) 2014

The Minister of Municipal Affairs and Housing, under Section 3 of the Planning Act, can issue policy statements that provide direction to other ministries, municipalities and agencies on matters of provincial interest as they relate to land use planning. These policy statements are developed in consultation with other ministries and are updated from time to time. The latest PPS came into effect on April 30, 2014 and any land use decision by any authority that affects a planning matter must be consistent with the PPS.

The 2014 Provincial Policy Statement provides a policy-led planning approach that recognizes the complex inter-relationship among environmental, economic and social factors in land use planning. The PPS supports a comprehensive, integrated and long-term approach to planning and recognizes linkages among policy areas. (Part III)

The PPS recognizes that the Province's natural heritage resources, water, agricultural lands, mineral aggregate resources, cultural heritage and archaeological resources provide important environmental, economic and social benefits. The wise use and management of these resources over the long term is a key provincial interest. The province must ensure that its resources are managed in a sustainable way to conserve biodiversity, protect essential ecological processes and public health and safety, provide for the production of food and fiber, minimize environmental and social impacts, and meet its long term economic needs. (PPS, Part IV)

The Rockridge Quarry property contains resources which are of provincial significance: a high quality aggregate resource, and natural heritage features. The operations and progressive rehabilitation plans, have been designed to achieve the balance required to manage these competing provincial interests. The proposal will provide for access to provincially significant mineral aggregate resource, while ensuring the protection of natural heritage features.

The following table provides an evaluation of the Rockridge Quarry proposal in the context of the relevant policies of the PPS. The evaluation is based largely on findings of various technical studies referenced previously in Section 1.0 of this report.

Table 4: Provincial Policy Statement – Consistency Analysis

PPS (2014) Policies	Analysis
<p><i>1.1.4. Rural Areas in Municipalities</i></p> <p><i>Healthy, integrated and viable rural areas should be supported by:</i></p> <p><i>f) Promoting the diversification of the economic base and employment opportunities through goods and services, including value-added products and the sustainable management or use of resources.</i></p>	<p>The proposed Rockridge Quarry is located in a rural area. The sustainable management or use of mineral aggregate resources contributes to the local economic base. The proposed quarry and the return of the lands to an agricultural use post extraction represents sustainable resource management.</p> <p>The use of existing transportation infrastructure also promotes efficient development.</p>
<p><i>1.1.5 Rural Lands in Municipalities:</i></p> <p><i>permitted uses are:</i></p> <p><i>a) to the management or use of resources;</i></p> <p><i>b) resource-based recreational activities;</i></p> <p><i>c) limited residential development;</i></p> <p><i>d) home occupation and home industries</i></p> <p><i>e) cemeteries;</i></p> <p><i>f) other rural land uses</i></p>	<p>The proposed Rockridge Quarry represents the use of a provincially significant natural resource (mineral aggregate) and is an appropriate rural land use.</p>
<p><i>1.2.6 Land Use Compatibility</i></p> <p><i>1.2.6.1 Major facilities and sensitive land uses should be planned to ensure they are appropriately designed, buffered and/or separated from each other to prevent or mitigate adverse effects from odour, noise and other contaminants, minimize risk to public health and safety, and to ensure the long-term viability of major facilities.</i></p>	<p>The site plans for the proposed Rockridge Quarry have been designed to ensure that appropriate mitigation measures are in place to minimize the effects of noise and dust from the operation. The recommendations of the Noise Assessment Report prepared by Valcoustics have been incorporated into the design of the quarry.</p>
<p><i>1.6.7.1 Efficient use shall be made of existing and planned infrastructure.</i></p>	<p>Truck traffic from the proposed Rockridge Quarry will utilize the County and Provincial road network. Based on the findings of the Traffic Study, the existing road infrastructure can safely accommodate the additional truck traffic that would be generated from the proposed quarry.</p>

PPS (2014) Policies	Analysis
<p><i>1.7.1 Long-term economic prosperity should be supported by:</i></p> <p><i>b) optimizing the long-term availability and use of land, resources, infrastructure, electricity generation facilities and transmission and distribution systems and public service facilities;</i></p>	<p>The proposed Rockridge Quarry will increase the availability of close-to-market supplies of aggregate resources in this area of Peterborough County. The progressive rehabilitation plan ensures that the site will be restored to an appropriate after use.</p>
<p><i>2.1.1 Natural features and areas shall be protected for the long term.</i></p>	<p>The Site Plans have incorporated a number of measures to protect natural features on the site and on adjacent lands. Setbacks from the eastern boundary of the site (escarpment) and the wetland feature located along the north boundary are designed to provide a buffer and maintain the ecological function of these areas.</p> <p>The Natural Heritage Report has evaluated the impacts of the proposal on significant wetlands, woodlands, fish habitat, and habitat of endangered species and threatened species. The recommended mitigative measures are incorporated to ensure no negative impacts on these natural features or their functions. In addition, the rehabilitation plan has been designed to incorporate the recommendations of the Natural Heritage report, specifically with respect to habitat creation for Species at Risk.</p>

PPS (2014) Policies	Analysis
<p><i>2.2.1 Planning authorities shall protect, improve or restore the quality and quantity of water by:</i></p> <p><i>a) using the watershed as the ecologically meaningful scale for integrated and long-term planning;</i></p> <p><i>b) minimizing potential negative impacts, including cross-jurisdictional and cross- watershed impacts;</i></p> <p><i>c) identifying surface water resource systems consisting of ground water features, hydrologic functions and natural heritage features and areas, and surface water features including shoreline areas, which are necessary for the ecological and hydrological integrity of the watershed;</i></p> <p><i>d) maintaining linkages and related functions among ground water features, hydrologic functions and natural heritage features and areas and surface water features including shoreline areas;</i></p> <p><i>e) implementing necessary restrictions on development and site alteration to:</i></p> <p><i>1. protect all municipal drinking water supplies and designated vulnerable areas; and</i></p> <p><i>2. protect, improve or restore vulnerable surface and ground water, sensitive surface water features and sensitive ground water features, and their hydrologic functions;</i></p> <p><i>f) planning for efficient and sustainable use of water resources, through practices for water conservation and sustaining water quality; and</i></p>	<p>The proposal will ensure the preservation of existing groundwater quality and quantity by retaining a minimum 2 metre buffer between the quarry floor and the established high water table.</p> <p>Several operational best practices have been included on the Operations Plan in order to minimize any potential for surface activities to impact groundwater quality.</p> <p>These include groundwater level monitoring and restriction of surface activities in accordance with provincial guidelines. Further, contingency measures have been implemented on the site plans in order to provide for appropriate corrective actions should groundwater be encountered during extraction.</p>

PPS (2014) Policies	Analysis
<p><i>2.5 Mineral Aggregate</i></p> <p><i>2.5.2.1 As much of the mineral aggregate resources as is realistically possible shall be made available as close to markets as possible.</i></p> <p><i>Demonstration of need for mineral aggregate resources, including any type of supply/demand analysis, shall not be required, notwithstanding the availability, designation or licensing for extraction of mineral aggregate resources locally or elsewhere.</i></p>	<p>The proposed quarry will provide a significant supply of commercially viable aggregate material for the local and regional market. The proposed quarry will increase access to close-to-market supply of aggregates in local construction markets, and will also provide a source for dimension/landscaping stone products.</p>
<p><i>2.5.2.2 Extraction shall be undertaken in a manner which minimizes social, economic, and environmental impacts.</i></p>	<p>The technical studies prepared in support of the proposed Rockridge Quarry demonstrate that no natural or cultural heritage features will be impacted by the development. The hydrogeological study has confirmed groundwater elevations and a series of operational practices designed to restrict activities which could present threats to groundwater have been included on the operations plan. Adherence to provincial standards for noise and dust will minimize any potential social impacts and nuisances. The TOARC contributions will provide a sustained fund to the Township for road maintenance along the proposed haul route and ensure safe vehicular access to and from the site is provided over the long-term with minimal disruption to existing traffic flows.</p>

PPS (2014) Policies	Analysis
<p><i>2.5.2.3 Mineral aggregate resource conservation shall be undertaken, including through the use of accessory aggregate recycling facilities within operations, where feasible.</i></p>	<p>The proposed Rockridge Quarry provides for resource conservation and proposes recycling of construction materials for re-use as part of the quarry operations.</p>
<p>2.5.3 Rehabilitation</p> <p><i>2.5.3.1 Progressive and final rehabilitation shall be required to accommodate subsequent land uses, to promote land use compatibility, to recognize the interim nature of extraction, and to mitigate negative</i></p>	<p>As described previously in this report, the Rockridge Quarry will be progressively rehabilitated to open field, rock barren and forested areas</p>
<p>2.6 Cultural Heritage and Archaeology</p> <p><i>2.6.2 Development and site alteration shall only be permitted on lands containing archaeological resources or areas of archaeological potential unless significant archaeological resources have been conserved.</i></p>	<p>A Stage I and II Archeological Assessment was completed by WSP Canada Ltd. No artifacts or features of cultural heritage value or interest (CHVI) were encountered during Stage 2 Archeological Assessment. The proposal is consistent with the PPS in this regard.</p>

4.4 Growth Plan for the Greater Golden Horseshoe, 2017

The Growth Plan needs to be referenced for land use applications within this area in order to assess consistency with the principles of the Plan. A review of the Growth Plan indicates that the statement on Mineral Aggregate Resources is relevant. The subject lands have been identified as being within an area of High Potential Mineral Resources in the Township of Trent Lakes Official Plan. This designation has been confirmed by on-site testing and analysis of the aggregate material.

“Through sub-area assessment, the Ministers of Public Infrastructure Renewal and Natural Resources will work with municipalities, producers of mineral aggregate resources, and other stakeholders to identify

significant mineral aggregate resources for the GGH, and to develop a long-term strategy for ensuring the wise use, conservation, availability and management of mineral aggregate resources in the GGH, as well as identifying opportunities for resource recovery and for coordinated approaches to rehabilitation where feasible.” (Section 4.2.3.1)

Section 2.2.2 1.i) Managing Growth of the Growth Plan is also relevant. This section outlines methods of managing growth by “directing development to settlement areas, except where necessary for development related to the management or use of resources, resource-based recreational activities, and rural land uses that cannot be located in settlement areas”.

The Rockridge Quarry proposal is consistent with the Growth Plan.

4.4 County of Peterborough Official Plan

The County Plan provides the broad framework for planning and development, and sets a framework for coordination of planning issues which cross local municipal boundaries. Detailed strategies, policies and land use designations are addressed in the local municipal planning documents.

The following table highlights the policies which are most relevant to the consideration of the Rockridge Quarry proposal.

Peterborough County OP Policies	Analysis
<p>4.0 Watershed Strategic Components</p> <p>4.1 Natural Environment</p> <p>The County recognizes the important contribution that natural systems, natural heritage features and natural resources make to the social, economic, and environmental health of local municipalities. In this regard, the County has identified the following areas to ensure that the appropriate land use and resource management protection policies are applied to them.</p> <p>Hazard Lands</p> <ul style="list-style-type: none"> • Floodplains <p>Natural Heritage Features</p> <ul style="list-style-type: none"> • wetlands • flood plains • endangered and threatened species habitat • fish habitat • wildlife habitat • woodlands • valley lands • areas of natural and scientific interest • Oak Ridges Moraine <p>Natural Resources</p> <ul style="list-style-type: none"> • Mineral and mineral aggregates <p>4.1.3 – Policies</p> <p>4.1.3.1 - General</p> <p>Development and site alterations within provincially significant wetlands and in significant portions of the habitat of endangered and threatened species is not permitted. However, with the exception of the Oak Ridges Moraine Policy, development or site alteration such as filling, grading and excavating may be permitted within or adjacent to the remaining natural</p>	<p>The Natural Environment Technical Report prepared by Niblett (June 2017) identified the following natural heritage features on the site or adjacent lands:</p> <ul style="list-style-type: none"> • Significant wildlife habitat • Habitat for Species at Risk <p>Niblett completed an Impact Assessment to identify the potential effects of the Rockridge Quarry proposal on the Natural Heritage system. Their report recommended a number of mitigative measures to protect these features and ecological functions, and these recommendations have been incorporated into the design of the operations and site rehabilitation.</p>

<p>heritage features listed in Section 4.1 of this Plan, provided that it has been demonstrated by an Environmental impact assessment that there will be no negative impacts on the natural features or ecological functions for which the area is identified.</p>	
<p>4.1.3.3 - Mineral Aggregate and Non-Aggregate Mineral Resources</p> <p>Mineral aggregate and non-aggregate resources shall be recognized and managed by local Official Plans as limited and non-renewable natural resources to be protected for long-term use;</p> <ul style="list-style-type: none"> - Local municipalities, in consultation with the County, the Ministry of Northern Development and Mines and the Ministry of Natural Resources shall review development proposals with respect to mineral aggregate and non-aggregate resources; - Local municipalities shall identify and protect from incompatible uses and activities that would preclude or hinder their expansion or continued use, or which would be incompatible for reasons of public health, public safety, or environmental impact, all existing mineral aggregate and mineral mining operations and known significant deposits of aggregate and non-aggregate mineral resources.; - Existing mineral aggregate operations are permitted to continue without the need for any official plan amendment, rezoning, or development permit; - In areas of significant mineral aggregate and non-aggregate resource potential, as identified by the Ministry of Natural Resources, the Ministry of Northern Development and Mines, private landholders or the development industry in consultation with the local municipalities, uses which do not preclude future access to and extraction of these potential resources may be permitted. All other uses of the land which prohibit future access to and extraction of the resources shall be considered secondary and generally discouraged until such time as the resource is substantially depleted. 	<p>The policies recognize the importance of protecting aggregate resources within the County, as well as the need to balance resource extraction with protection of agricultural lands and the natural environment.</p>

<p>All extraction and processing operations should be located and operated in such a manner as to minimize the impact on the natural, social and built environments. In particular, water resources including both surface and ground, shall be protected from adverse impacts of extraction. Appropriate separation distances for proposed and existing aggregate operations are usually determined on a site specific basis. However, the Ministry of Environment considers the area of influence to be 500 metres for a quarry, 300 metres for a pit below the groundwater table and 150 metres for a pit above the groundwater table.</p> <p>This area is considered to have the greatest impact on sensitive land uses from the pit or quarry operation. Environmental studies should be required to assess the impact if development occurs within this influence area. This influence area should be applied reciprocally to new sensitive land uses encroaching upon an existing extraction operation or lands committed for future extraction.</p>	<p>The proposed quarry will provide a high quality supply of mineral aggregate material to the local and regional markets. Impacts to the significant natural heritage features on and near the property will be mitigated through a combination of strategies which include: avoidance, buffering, and rehabilitation planning designed to replace or enhance the features on site.</p> <p>In addition to the Planning Act applications for Official Plan amendment and rezoning, the proposed quarry will require an Aggregate Resources Act License from the Ministry of Natural Resources. Technical reports have been prepared as part of the applications to evaluate the impacts of the proposal on the natural environment, hydrologic and hydrogeological features, noise and traffic. The applications will be circulated to commenting agencies for technical review and comment.</p> <p>The local Official Plan for the Municipality of Trent Lakes addresses the matters outlined in the County Official Plan with respect to assessing the impact of new quarries.</p> <p>The Planning Act and Resources Act applications to permit the development of the Rockridge Quarry are supported by a series of technical studies which have assessed the impact of the proposed operation on neighbouring residents, the natural environment, the impact of roads and municipal water supply. The Site Plans detail the manner in which operations will be carried out as described by the sequence of mining and progressive rehabilitation.</p>
<p>Pit and quarry operators will be required to undertake progressive and final rehabilitation to accommodate subsequent land uses, and to promote land use compatibility, and to recognize the interim nature of extraction. Final rehabilitation will take surrounding land use and approved land use designations into consideration.</p>	<p>The site will be progressively rehabilitated in accordance with provincial and local policy guidelines. Careful consideration and planning have gone into the design of the operations and the rehabilitation of the quarry to minimize impacts and ensure that the lands are returned to an appropriate after use which is compatible with the surrounding area.</p>
<p>4.1.3.4 - Natural Heritage Features</p> <p>The diversity of natural features in an area, and the natural connections between them, and the long-term ecological function and biodiversity of natural heritage systems should be maintained, restored or, where possible, improved, recognizing the linkages between and among natural heritage features and areas, surface water features, and ground water features.</p>	<p>The Natural Heritage Report has evaluated the impacts of the proposal on significant wetlands, woodlands, fish habitat, and habitat of endangered species and threatened species. The recommended mitigative measures are incorporated to ensure no negative impacts on these natural features or their functions.</p>

<p>Local plans will prohibit development and site alterations within the following types of significant natural heritage features:</p> <ul style="list-style-type: none"> - significant wetlands; - significant portions of the habitat of endangered and threatened species; - Local plans may permit development and site alteration in: <ul style="list-style-type: none"> - significant woodlands south and east of the Canadian Shield; - significant valley lands south and east of the Canadian Shield; - significant wildlife habitat; and; - significant areas of natural and scientific interest; - Development and site alteration will not be permitted in fish habitat except in accordance with provincial and federal requirements. <p>Development and site alteration shall not be permitted on adjacent lands to the natural heritage features and areas listed above unless the ecological function of the adjacent lands has been evaluated in accordance with an environmental impact assessment as described in Section 4.1.3.1 and it has been determined that there will be no new negative impacts on the natural features or on their ecological functions.</p>	
<p>4.1.3.5 - Water Resources</p> <p>The quality and quantity of ground and surface water, and the hydrological functions of strategic water resource areas, will be protected or enhanced;</p> <ul style="list-style-type: none"> - mitigative measures and/or alternative development approaches may be required in order to protect, improve, or restore sensitive surface water features, sensitive ground water features, and their hydrologic functions; - Local plans will define development incompatible with ground and surface water protection, and prohibit it within strategic water resource areas; 	<p>The proposal will ensure the preservation of existing groundwater quality and quantity by retaining a minimum 2 metre buffer between the quarry floor and the established high water table.</p> <p>Several operational best practices have been included on the Operations Plan in order to minimize any potential for surface activities to impact groundwater quality.</p> <p>These include groundwater level monitoring and restriction of surface activities in accordance with provincial guidelines. Further, contingency measures have been implemented on the site plans in order to provide for appropriate corrective actions should groundwater be encountered during extraction.</p>
<p>4.3 RURAL AND CULTURAL LANDSCAPE</p> <p>4.3.1 - Goal</p> <ul style="list-style-type: none"> • to preserve and enhance the rural character of the County as a cultural resource and ensure the viability of the agricultural industry. 	<p>The proposed Rockridge Quarry is located in a rural area. The sustainable management or use of mineral aggregate resources contributes to the local economic base. The proposed quarry and the return of the lands to an agricultural use post extraction represents sustainable resource management.</p>

<p>4.3.3.1 – General</p> <p>Rural areas will generally be the focus of resource activity, resource based recreational activity and other rural land uses. The County, recognizing the need for growth on a limited basis, will permit non-agricultural related uses in the rural community outside prime agricultural areas and other agricultural areas designated in local plans in accordance with Section 4.3.3.2 which reflect the cultural and rural character of the area, promote a variety of living and employment opportunities for the rural community and do not negatively impact on the natural environment that cannot be located in settlement areas;</p> <p>Development shall be appropriate to the infrastructure which is planned or available, and shall avoid the need for unjustified and/or uneconomical expansion of this infrastructure</p>	
<p>5.2 HERITAGE</p> <p>5.2.3 – Policies</p> <p>5.2.3.3 - Archaeological Resources</p> <p>The County of Peterborough will:</p> <ul style="list-style-type: none"> - encourage the Province to maintain the database of registered archaeological sites throughout the Province - encourage protection of archaeological resources as identified by the Ministry of Culture - require that where the potential presence of an archaeological resource has been identified by the Ministry of Culture, an archaeological study be undertaken by a licensed archaeological consultant pursuant to the Ontario Heritage Act. Should any significant archaeological remains be discovered an appropriate mitigation strategy will be developed and conducted to the satisfaction of the Ministry of Culture <p>☐ require that lands or sites identified by archaeological studies, containing the remains of human beings, adhere to the provisions of The Cemeteries Act (Revised) and the Ontario Heritage Act as they pertain to archaeological resources.</p> <p>Development and site alteration may be permitted on lands containing archaeological resources or areas of archaeological potential if significant archaeological resources have been conserved by removal and documentation or preservation on site. Where significant archaeological resources</p>	<p>A Stage I and II Archeological Assessment was completed by WSP Canada Ltd. No artifacts or features of cultural heritage value or interest (CHVI) were encountered during Stage 2 Archaeological Assessment. The proposal is consistent with the County OP in this regard.</p>

must be preserved on site, only development and site alteration which maintain the heritage integrity of the site will be permitted.

4.4 Municipality of Trent Lakes Official Plan

The Official Plan for the Municipality of Trent Lakes recently went through a comprehensive review (OPA 7) and was further revised by OPA 46 to recognize the name change from Galway-Cavendish and Harvey to Trent Lakes. The Official Plan was approved by Council on August 13, 2013.

The Rockridge Quarry lands are currently designated as *Agricultural (A)* in the Official Plan. The lands are also identified in the Official Plan as a *Secondary Mineral Resource Area*. The Rockridge Quarry proposal has been reviewed in the context of the Municipality of Trent Lakes Official Plan.

The following table highlights the policies of the Trent Lakes Official Plan which are most relevant to the consideration of the Rockridge Quarry proposal.

Municipality of Trent Lakes OP Policies	Analysis
<p>4.0 GOALS AND OBJECTIVES</p> <p>4.7 Natural Resources</p> <p>Goal To provide for the optimum use and development of the Township’s natural resource base through management based on sound economic, social, environmental, and land use planning practices.</p> <p>Objectives ii) To ensure that new development does not jeopardize the commercial development of an existing natural resource including mineral aggregate deposits and woodlots iii) To assist in the determination and development of existing natural resources which have commercial value Viii) To have regard for the Provincial Policy Statement ix) To gather inventories and background studies which characterize the natural environment within the Township in order to identify additional areas of sensitivity as well as areas best suited for future development by studies submitted during the planning period as well as any studies performed by the Township of other agencies.</p>	<p>The Rockridge property contains significant mineral aggregate resources as identified in the Township’s Official Plan. The proposed quarry will allow for the utilization of these resources to produce a supply of local construction materials as well as supplying dimension stone for markets in Ontario and internationally.</p>
<p>5.0 LAND USE POLICIES</p> <p>5.1.10 Protection of the Environment Environmentally Sensitive Areas are important elements of the Municipality’s ecosystem, which require proper conservation and management in order to maintain the environmental health of the community. Owners of lands that contain Environmentally Sensitive Areas will be encouraged to be good land stewards. It is intended that Environmentally Sensitive Areas be conserved and protected to the greatest extent possible, including public ownership, if feasible</p>	<p>The Official Plan mapping for Trent Lakes does not identify any Natural Areas on the subject lands. The Natural Heritage Report (Niblett 2017) has evaluated the impacts of the proposal on significant wetlands, woodlands, fish habitat, and habitat of endangered species and threatened species. The recommended mitigative measures are incorporated to ensure no negative impacts on these natural features or their functions. In addition, the rehabilitation plan has been designed to incorporate the recommendations of the</p>

	Natural Heritage report, specifically with respect to habitat creation for Species at Risk.
<p>5.1.25 Heritage Resource Conservation</p> <p>Heritage resources include but are not necessarily restricted to archaeological sites, buildings and structural remains of historical, architectural and contextual value, and human-made rural, village and community landscapes of historic and scenic interest.</p> <p>Council shall recognize the importance of cultural and heritage resources within the Township; and encourage the identification restoration, protection, maintenance and enhancement of such resources. All new development permitted by the land use policies and designations of the Plan, shall have regard for heritage resources and shall, whenever possible incorporate these resources into any plans which may be prepared for such new development.</p>	<p>A Stage I and II Archeological Assessment was completed by WSP Canada Ltd. No artifacts or features of cultural heritage value or interest (CHVI) were encountered during Stage 2 Archeological Assessment. The proposal is consistent with the Township OP in this regard.</p>
<p>5.10 AGGREGATE RESOURCE EXTRACTION</p> <p>5.10.2 Permitted Uses</p> <p>The uses permitted in the Aggregate Resource Extraction designation shall include mineral aggregate operations. Associated operations such as drilling, blasting, crushing, screening, washing and blending aggregate, aggregate recycling, aggregate storage, weigh scales, associated buildings and concrete and asphalt batch plants may also be permitted. These associated operations will only be permitted where they are compatible with other uses permitted in the Aggregate Resource Extraction designation and will in no way hamper the rehabilitation of these areas for other land uses.</p> <p>Lands designated as Aggregate Resource Extraction may also be used for agricultural, resource management, open-air recreation or forestry purposes.</p> <p>Mineral Aggregate Resource areas are identified on Schedule “C”. These lands may be used in accordance with the policies of the land use designations on Schedules “A1”, “A2” and “A3” of this Plan. However, no new non-aggregate development shall be approved except in accordance with the provisions of Section 5.10.7.</p>	<p>The Rockridge site is identified on Schedule ‘C’ of the Trent Lakes Official Plan within a Mineral Aggregate Resource Area.</p> <p>The applicant has submitted an application to designate the lands as “Aggregate Resource Extraction”. The proposed quarry uses are consistent with the permitted uses in the Aggregate Resource Extraction designation.</p>
<p>5.10.4 Policies for New or Expanding Mineral Aggregate Operations</p> <p>An amendment to this Plan shall be required when a new or expanding mineral aggregate operation is proposed on lands that are not designated as Aggregate Resource Extraction on Schedules “A1”, “A2” or “A3.”</p> <p>The policies of Section 5.10, Section 8.10.3 (“Amendments”) and any other applicable policy of this Plan shall be addressed to the satisfaction of Council for the adoption of an amendment to this Plan to permit a new or expanding mineral aggregate operation.</p>	<p>An application to amend to Official Plan has been submitted for the proposed Rockridge Quarry.</p>

Section 5.10.5 of the Official Plan for Trent Lakes sets out the matters that are to be considered by Council to inform their decision on amendments to permit a new mineral aggregate operation. The following section of this report outlines how the Rockridge proposal addresses each of the matters outlined in this Section of the OP.

- a) *The extraction of mineral aggregate resources shall be undertaken in a manner that minimizes social and environmental impacts.*

Response: The Planning Act and Resources Act applications to permit the development of the Rockridge Quarry are supported by a series of technical studies which have assessed the impact of the proposed operation on neighbouring residents, the natural environment, the impact of roads and municipal water supply. The Site Plans detail the manner in which operations will be carried out as described by the sequence of mining and progressive rehabilitation.

- b) *A mineral aggregate operation should be screened from public view to the extent possible, in order to protect the scenic characteristics of the area.*

Response: The initial phases of the proposed quarry will be at the far east end of the site, and will be well removed from view. As the operations move westerly, towards County Rd. 507, the perimeter berms, which are designed for noise attenuation, will also serve as a visual screen.

- c) *Regard shall be given to compatibility with existing adjacent land uses that might be affected by a pit or quarry operation. This may be reflected through measures such as extraction setbacks and/or other mitigative techniques such as the use of vegetation or berms to provide screening, restrictions on the location of machinery, the timing of extraction operations, and the location and condition of haul routes. Any mitigative techniques being established should depend on a site-by-site review, having regard to the policies of this Plan. These requirements may be implemented through:*
- i) *conditions on the licence and/or site plan under the Aggregate Resources Act at the time of licensing by the Ministry of Natural Resources;*
 - ii) *regulations in a site-specific zoning by-law for the property; and*
 - iii) *provisions in a development agreement under Section 5.10.6 of this Plan.*

Response: As noted above, the berm that is proposed along the western limit of the license boundary will provide a visual and acoustic screen for the quarry operations. The adjacent lands to the south are the site of an existing licensed quarry. The site is compatible with existing adjacent land uses.

- c) *As a general policy, a mineral aggregate operation for a pit should not be established within 150 metres of a sensitive land use for a pit above the water table, or within 300 metres of a sensitive land use for a pit below the water table. A mineral aggregate operation for a quarry should not be established within 500 metres of a sensitive land use. Any setbacks not consistent with the above, and/or mitigative techniques being proposed shall depend on a site-specific review having regard to the policies of this Plan.*

For the purposes of this section, “sensitive land use” means a building, amenity area or outdoor space where routine or normal activities occurring at reasonably expected times would experience one or more adverse effect such as noise, vibration, odours and other air emissions,

litter, dust and other particulates, and other contaminants, generated by a nearby facility or land use. A sensitive land use and associated activities may include, but are not limited to, one or a combination of:

- i. Residential uses or facilities where people sleep, for example, single unit dwellings and multiple-unit dwellings, nursing homes, hospitals, trailer parks, recreational resorts, camp grounds, mobile home parks, etc. These uses are considered to be sensitive 24 hours per day;*
- ii. Permanent institutional uses such as schools, churches, municipal offices, libraries, community centres, and day care centres; and*
- iii. Community and neighbourhood parks and playgrounds.*

Response: There are no sensitive land uses within 500 metres of the proposed quarry operation.

- d) Proposals for mineral aggregate operations shall be evaluated for matters such as, but not limited to, land use compatibility, impacts on groundwater, effects of noise, blasting, dust, and traffic. Recommendations for mitigative techniques shall have regard to Paragraph (c) above and to the policies of this Plan.*

Response: The technical studies prepared in support of the proposed Rockridge Quarry demonstrate that no natural or cultural heritage features will be impacted by the development. The hydrogeological study has confirmed groundwater elevations and a series of operational practices designed to restrict activities which could present threats to groundwater have been included on the operations plan. Adherence to provincial standards for noise and dust will minimize any potential social impacts and nuisances.

- f) A mineral aggregate operation shall not be permitted:*
 - i) in significant wetlands;*
 - ii) in significant habitat of endangered species and threatened species;*
 - iii) within 50 metres of a river, stream or lake; or*
 - iv) in fish habitat except in accordance with provincial and federal requirements.*

Response: The proposed quarry will no impact any of the features outlined in Section 5.10.5 (f).

- g) A mineral aggregate operation shall not be permitted in significant Areas of Natural and Scientific Interest (ANSI) or significant wildlife habitat unless it has been demonstrated that there will be no negative impacts on the natural features or their ecological functions.*

Response: There is no identified ANSI on or adjacent to the proposed quarry.

- h) A mineral aggregate operation shall not be permitted on lands adjacent to the following natural heritage features unless the ecological function of the adjacent lands has been evaluated and it has been demonstrated that there will be no negative impacts on the natural features or on their ecological functions. For the purposes of this policy, the determination of “adjacent lands” shall be as follows:*
 - i) within 120 metres of a significant wetland;*
 - ii) within 50 metres of a significant Area of Natural and Scientific Interest (ANSI);*
 - iii) within 50 metres of significant wildlife habitat; and*
 - iv) within 50 metres of the significant habitat of endangered and threatened species.*

Response: The Natural Environment Report (Niblett 2017) identified significant wildlife habitat and habitat for species at risk on and adjacent to the proposed quarry. The proposed mitigation measures, which includes buffer, setbacks and a restoration program, all allow for the recovery of provincially significant aggregate resource, while achieving a net environmental gain as an objective of the operations and rehabilitation of the site.

- i) *All mineral aggregate operations must satisfy the requirements of the authority having jurisdiction as to water supply and groundwater pumping, and waste water disposal.*

Response: The proposed quarry will extract limestone resources from above the water table. If it is required for washing aggregates, the applicant may apply for a Permit to Take Water, which would be reviewed, and if approved, issued, by the Ministry of Environment and Climate Change.

- j) *All mineral aggregate operations must satisfy the requirements of the Ministry of the Environment and/or By-laws of the Municipality as to the control of dust, noise and vibration.*

Response: Adherence to all provincial and local regulations with respect to noise, dust and vibration is included as a condition on the Site Plans.

- k) *All mineral aggregate operations shall satisfy the requirements of the Aggregate Resources Act as to licensing and regulation.*

Response: An application has been made under the Aggregate Resources Act for a class A, category 1, quarry above the water table. The application will be reviewed by the Ministry of Natural Resources and Forestry to confirm that it meets the requirement of the Act and regulations.

- l) *The establishment of all new mineral aggregate operations on lands designated under the Aggregate Resources Act shall be in accordance with the applicable provisions of the "Aggregate Resources of Ontario – Provincial Standards" document of the Province of Ontario.*

Response: As noted above, the MNRF will be reviewing the License application which has been submitted in accordance with the Provincial Standards,

- m) *Haul routes and the traffic generated by the proposed mineral aggregate operation shall be considered through the preparation of a traffic impact assessment. The traffic impact assessment shall be undertaken by the applicant and shall be acceptable to the Municipality and the County of Peterborough. The traffic impact assessment shall address, but shall not necessarily be limited to, the projected volume of truck traffic related to the proposed mineral aggregate operation and existing mineral aggregate operations (whether active or not) using the same haul routes, the physical suitability of the haul routes for truck traffic, the nature and volume of existing traffic on the haul routes, requirements for improvements to the haul routes, the location and design of a safe site entrance, and community impacts and safety.*

Response: A traffic impact analysis has been undertaken to evaluate the impact of the proposed quarry traffic. Please refer to the report for a full description of this assessment.

- n) *Progressive rehabilitation of mineral aggregate operations will be required. The proposed use of the rehabilitated lands shall be compatible with the adjacent land use designations on Schedules*

“A1”, “A2” and “A3” of this Plan. Plans for the rehabilitation of the site shall be acceptable to the Township.

Response: In accordance with the requirements of the Provincial Policy Statement, 2014 and the Aggregate Resources Act Provincial Standards, the rehabilitation of the extracted lands will occur in a progressive manner, with the rehabilitation following the removal of the aggregate material as closely as is feasible.

- o) A proposed mineral aggregate resource operation within 500 metres of an active or former waste disposal site shown on Schedule “A1”, “A2” or “A3” shall address the applicable policies of Section 5.8 (“Disposal Industrial”) of this Plan.*

Response: The site is not within 500 metres of an active or former waste disposal site, according to the OP Schedules.

- p) The application shall address the policies of Section 5.1.10, “Protection of Environment,” to Council’s satisfaction.*

Response: The Official Plan mapping for Trent Lakes does not identify any Natural Areas on the subject lands. The Natural Heritage Report (Niblett, 2017) has evaluated the impacts of the proposal on significant wetlands, woodlands, fish habitat, and habitat of endangered species and threatened species. The recommended mitigative measures are incorporated to ensure no negative impacts on these natural features or their functions. In addition, the rehabilitation plan has been designed to incorporate the recommendations of the Natural Heritage report, specifically with respect to habitat creation for Species at Risk.

- q) An application for an amendment to this Plan to permit the establishment of a new mineral aggregate operation or the expansion of an existing operation, whether or not the lands are designated under the Aggregate Resources Act, shall be accompanied by detailed site development plans and reports as listed below or as required by other sections of this Plan. Site plans required by the Aggregate Resources Act are acceptable for the purposes of this policy.*

Response: The Site Plans were prepared taking into consideration the requirements of the Aggregate Resources Act, the County of Peterborough Official Plan, the Municipality of Trent Lakes Official Plan and the Provincial Policy Statements, as well as the recommendations of the technical reports that were prepared in support of the application.

4.5 Municipality of Trent Lakes Zoning By-law

The area to be licensed is zoned ‘RU-12’ (Rural) according to the Trent Lakes Zoning By-law. An application for amendment the zoning by-law has been filed, and proposes to change the zoning to ‘EX’ (Extractive Industrial).

5.0 CONCLUSION AND RECOMMENDATION

The proponents have retained the services of technical experts to properly plan a new aggregate extraction operation. The team of experts, which includes an ecologist, hydrogeologist, noise expert, aggregate consultant and archaeologist, studied the subject lands and surrounding area and collectively designed a quarry operation and rehabilitation plan that:

- Is compatible with the surrounding landscape and reflects the importance of agricultural lands, through progressive and final rehabilitation;
- has no negative impact on the natural environment;
- has a minimal impact on the social environment of the area;
- maintains the intent and purpose of the County of Peterborough Official Plan and the Municipality of Trent Lakes Official Plan;
- represents wise management and use of resources; and,
- is consistent with the Provincial Policy Statement.

This Planning Report has provided a thorough evaluation of the proposed development. In view of the conclusions provided in Section 5, it is my professional opinion that the Rockridge Quarry proposal represents good planning.

This report has been prepared by:



Melanie Horton, MCIP, RPP

Director of Planning

Harrington McAvan Ltd.

FIGURES

Figure 1: Location Map

Figure 2: Surrounding Lands

Figure 3: Municipality of Trent Lakes Official Plan –Land Use & Transportation Plan

Figure 4: Municipality of Trent Lakes Official Plan –Natural Features

Figure 5: Municipality of Trent Lakes Official Plan – Mineral Aggregate Resource Areas

Figure 6: Municipality of Trent Lakes Zoning By-Law, Schedule A

Figure 7: ARA SITE PLAN – EXISITING FEATURES

Figure 8: ARA SITE PLAN – OPERATIONS PLAN PHASE A

Figure 9: ARA SITE PLAN – OPERATIONS PLAN PHASE B-D

Figure 10: ARA SITE PLAN – SECTIONS AND DETAILS

Figure 11: ARA SITE PLAN – REHABILITATION PLAN

Figure 1: Location Map

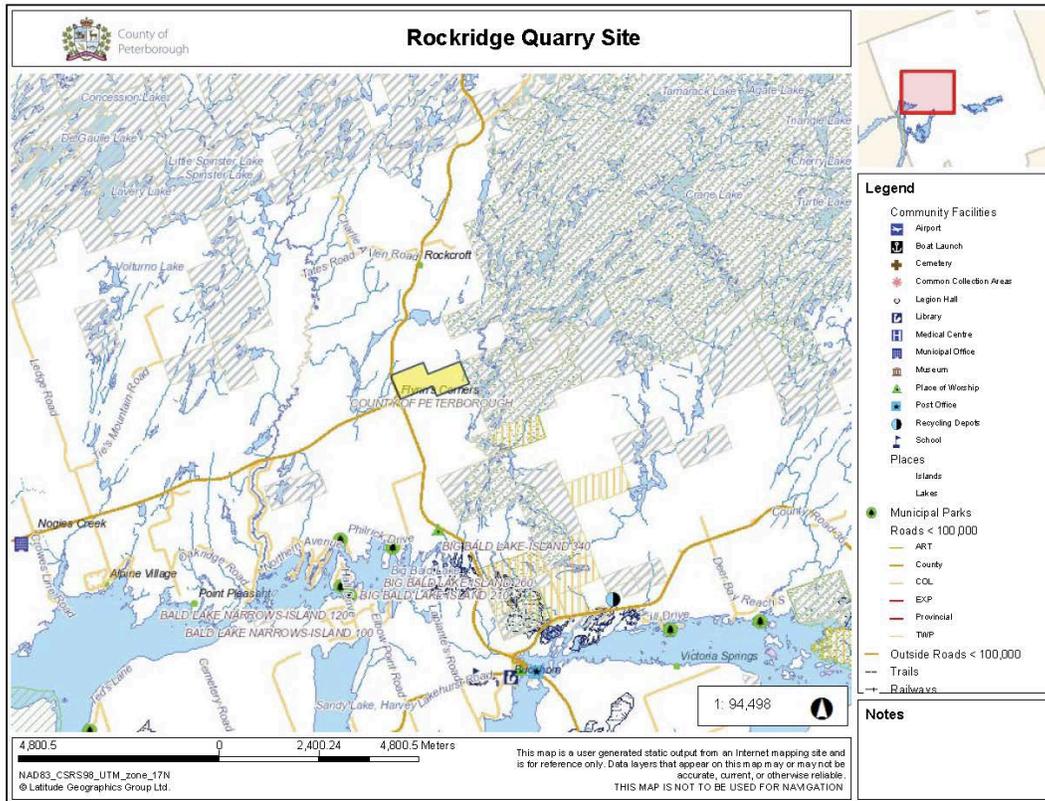


ROCKRIDGE QUARRY

Lot 21, Concession 8
Geographic Township of Harvey
Municipality of Trent Lakes,
County of Peterborough



Figure 2: Surrounding Lands

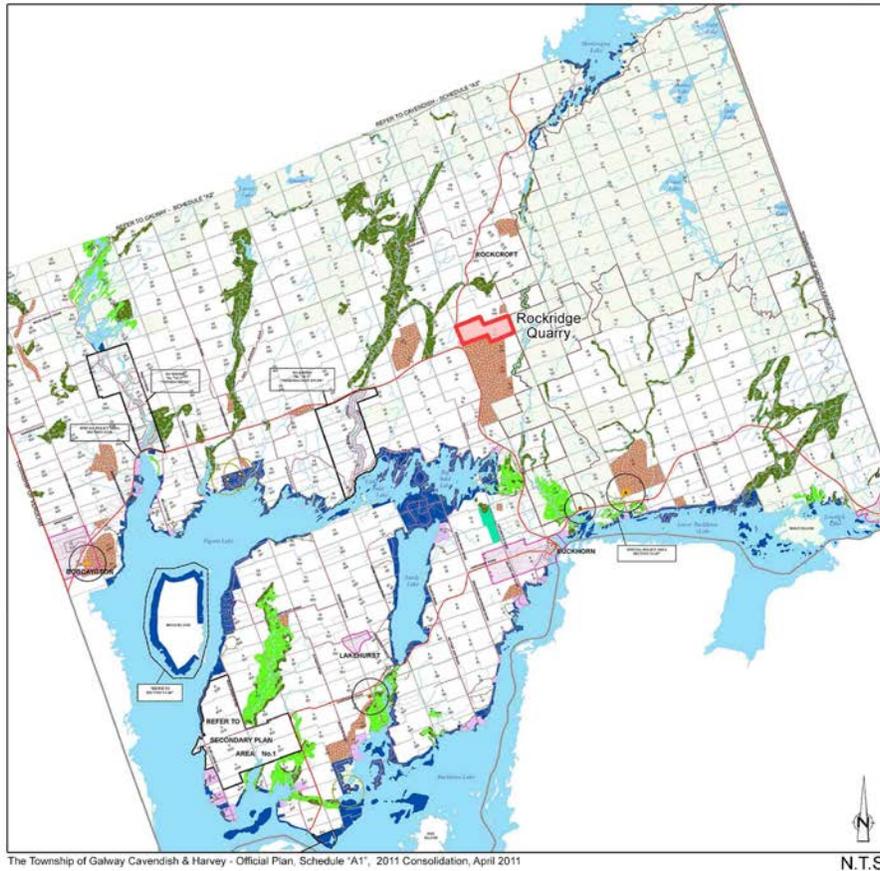


ROCKRIDGE QUARRY

Lot 21, Concession 8
Geographic Township of Harvey
Municipality of Trent Lakes,
County of Peterborough



**Figure 3: Trent Lakes Official Plan
Land Use & Transportation**



The Township of Galway Cavendish & Harvey - Official Plan, Schedule 'A1', 2011 Consolidation, April 2011

N.T.S.

Land Use & Transportation Plan

LEGEND

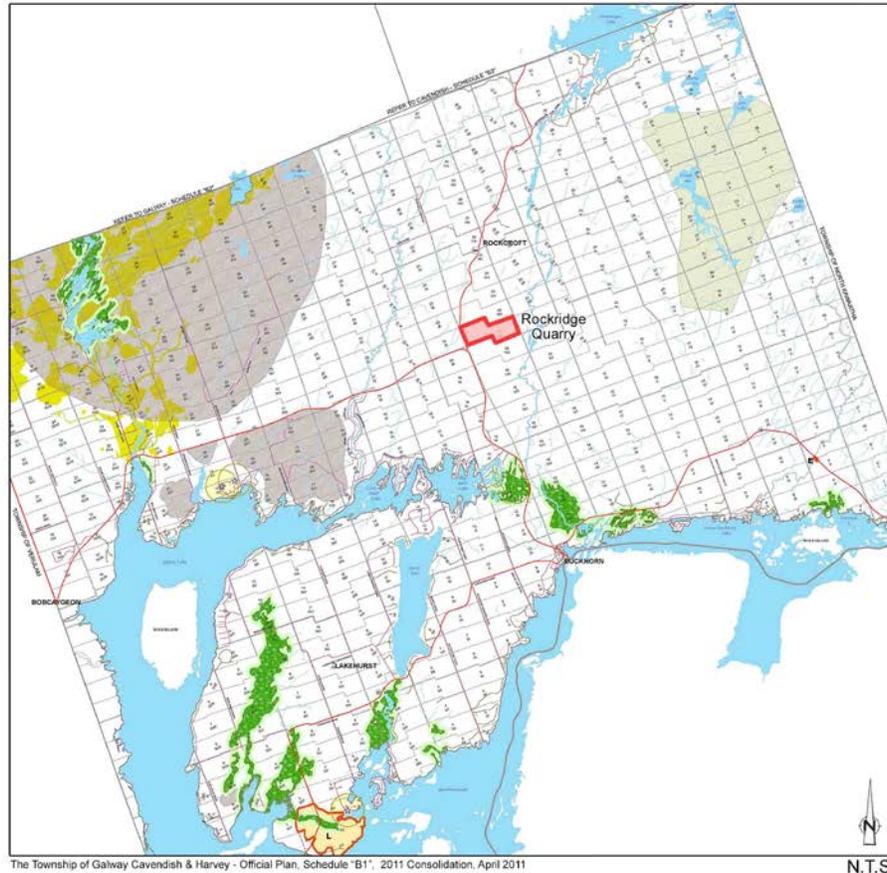
Provincial Highway	Disposal Industrial Active Landfill Site
County Road	Closed Landfill Site
Township Road	Landfill Site Area of Influence
Private Road	Aggregate Resource Extraction
Watercourse	Mining Area
Lakes	Environmental Protection
Municipal Boundary	Environmental Protection/ Provincially Significant Wetlands
Lot and Concession Boundary	Crown Land
Parcel Fabric	Kawartha Highlands Signature Site
Hamlet	Municipal Well
Rural	500 metre Well Influence
Recreational Dwelling Area	
Estate Residential	
Commercial	
Industrial	

ROCKRIDGE QUARRY

Lot 21, Concession 8
Geographic Township of Harvey
Municipality of Trent Lakes,
County of Peterborough



Figure 4: Municipality of Trent Lakes Official Plan, Natural Features



Natural Features

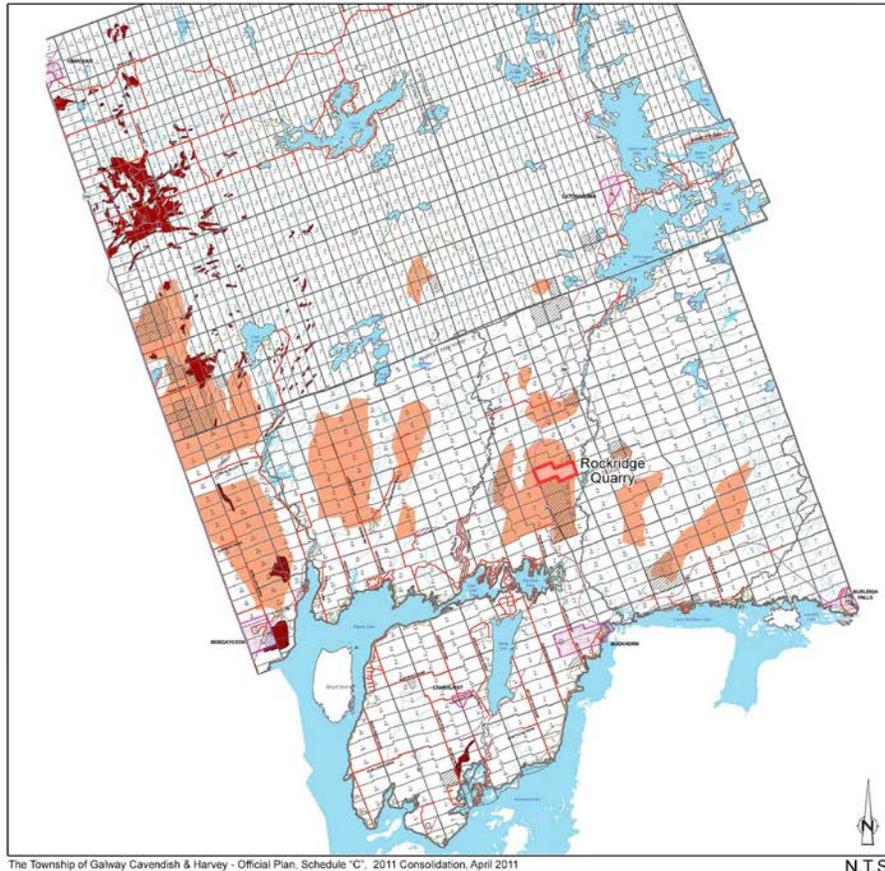
LEGEND	
Provincial Highway	120m Wetland Influence
County Road	Provincially Significant ANSI
Township Road	Earth Science
Private Road	Life Science
Watercourses	50m ANSI Influence
Lakes	KRCA Regulated Areas 182/06
Lot and Concession Boundary	Deer Wintering Areas
Municipal Boundary	Moose Wintering Areas
Municipal Water Supply	500 metre Well Influence
Provincially Significant Wetlands	

ROCKRIDGE QUARRY

Lot 21, Concession 8
 Geographic Township of Harvey
 Municipality of Trent Lakes,
 County of Peterborough



Figure 5: Municipality of Trent Lakes Official Plan, Mineral Aggregate Resource Areas



Mineral Aggregate Resource Areas

LEGEND

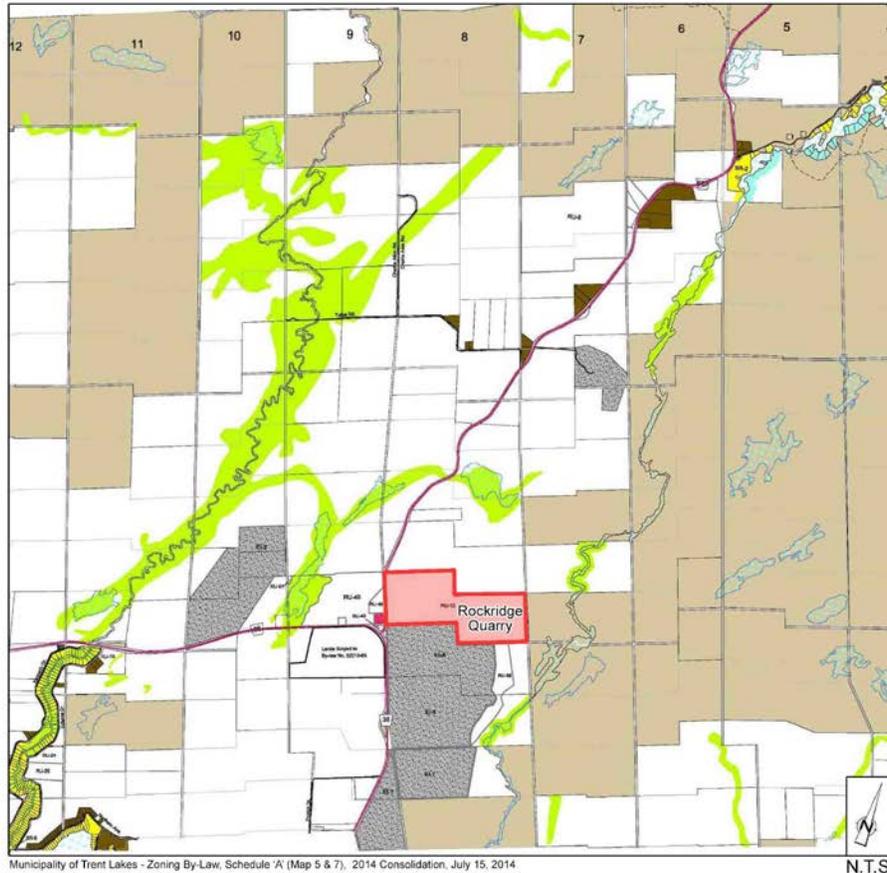
- | | |
|--|---|
|  Existing Pit or Quarry |  Private Road |
| Mineral Aggregate Resource |  Lot and Concession Boundary |
|  Sand and Gravel |  Watercourses |
|  Limestone Bedrock |  Lakes |
|  Provincial Highway |  Township Boundary |
|  Township Road |  Hamlets |
|  County Road | |

ROCKRIDGE QUARRY

Lot 21, Concession 8
 Geographic Township of Harvey
 Municipality of Trent Lakes,
 County of Peterborough



Figure 6: Municipality of Trent Lakes Zoning By-Law, Schedule A



Zoning Map

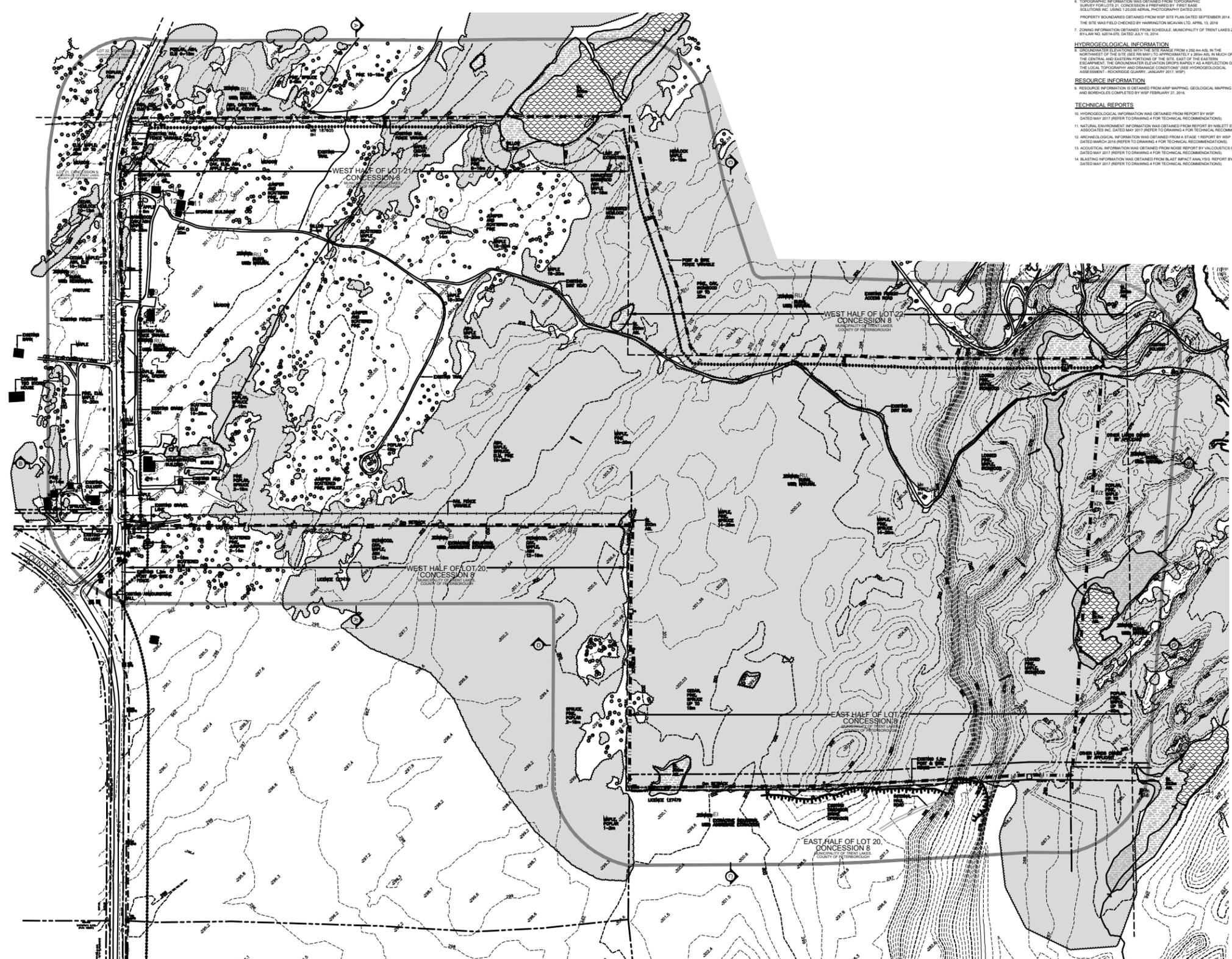
LEGEND

Rural Residential		Community Facility		Disposal Industrial	
Rural Residential - Private Access		Tourist Commercial		Environmental Protection	
Shoreline Residential		Hamlet Commercial		Rural	
Shoreline Residential - Private Access		General Commercial		Crown Land	
Hamlet Residential		General Industrial		Open Space	
Island Residential		Extractive Industrial		Development	
Provincial Highway		Private Roads		Landfill Area of Influence	
County Road		Hamlet Boundary			
Municipality Maintained Roads					

ROCKRIDGE QUARRY

Lot 21, Concession 8
 Geographic Township of Harvey
 Municipality of Trent Lakes,
 County of Peterborough

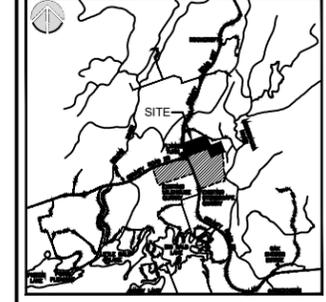




EXISTING FEATURES NOTES

- GENERAL SITE PLAN INFORMATION**
1. THIS SITE PLAN CONSISTS OF 5 DRAWINGS AND MUST BE READ COLLECTIVELY.
 2. ALL MEASUREMENTS SHOWN ON THIS SITE PLAN ARE IN METRES.
- LICENCE INFORMATION**
3. THIS SITE PLAN IS PREPARED FOR SUBMISSION TO THE MINISTRY OF NATURAL RESOURCES AND FORESTRY UNDER THE AGGREGATE RESOURCES ACT FOR A CATEGORY 4 CLASS 50 LICENCE: QUARRY ABOVE THE WATER TABLE.
 4. APPLICANT: 202688 ONTARIO INC. P.O. BOX 246 MISSISSAUGA, ONTARIO L4V 1L2
 5. TOTAL AREA TO BE LICENCED: 88.88 HA
 6. TOTAL AREA TO BE EXTRACTED: 88.88 HA
 7. TOTAL AREA TO BE REHABILITATED: 88.88 HA
- BASE INFORMATION**
8. TOPOGRAPHIC INFORMATION WAS OBTAINED FROM TOPOGRAPHIC SURVEY FOR LOTS 21, CONCESSION 8 (PREPARED BY: FIRST NAME SOLUTIONS INC. USING: LEICA TOTAL STATION PHOTOGRAMMETRY DATED 2013).
 9. PROPERTY BOUNDARIES OBTAINED FROM WSP SITE PLAN DATED: SEPTEMBER 2014. THE SITE WAS FIELD CHECKED BY HARRINGTON ADVANTAGE LTD. APRIL 13, 2016.
 10. ZONING INFORMATION OBTAINED FROM SCHEDULE 2, MUNICIPALITY OF TREAT LAKES ZONING BY-LAW NO. 1074-09, DATED JULY 15, 2014.
- HYDROGEOLOGICAL INFORMATION**
11. PROPOSED EXISTENCE WITHIN THE RANGE FROM 250 MM ASL IN THE NORTHWEST OF THE SITE (SEE RR 1001) TO APPROXIMATELY A 250M ASL IN EACH OF THE CENTRAL AND EASTERN PORTIONS OF THE SITE, EAST OF THE EASTERN BOUNDARY. THE GROUNDWATER ELEVATION DROPS RAPIDLY AS A REFLECTION OF THE LOCAL TOPOGRAPHY AND DRAINAGE CONDITIONS (SEE HYDROGEOLOGICAL ASSESSMENT: ROCKRIDGE QUARRY, JANUARY 2017, WSP).
- RESOURCE INFORMATION**
12. RESOURCE INFORMATION IS OBTAINED FROM AWP MAPPING, GEOLOGICAL MAPPING AND TEST AND BOREHOLES COMPLETED BY WSP FEBRUARY 27, 2016.
- TECHNICAL REPORTS**
13. HYDROGEOLOGICAL INFORMATION WAS OBTAINED FROM REPORT BY WSP DATED MAY 2017 (REFER TO DRAWING 4 FOR TECHNICAL RECOMMENDATIONS).
 14. NATURAL ENVIRONMENT INFORMATION WAS OBTAINED FROM REPORT BY NISLETT ENVIRONMENTAL ASSOCIATES INC. DATED MAY 2017 (REFER TO DRAWING 4 FOR TECHNICAL RECOMMENDATIONS).
 15. ARCHIOLOGICAL INFORMATION WAS OBTAINED FROM A STAGE 1 REPORT BY WSP DATED MARCH 2016 (REFER TO DRAWING 4 FOR TECHNICAL RECOMMENDATIONS).
 16. ACOUSTICAL INFORMATION WAS OBTAINED FROM NOISE REPORT BY HALOCUSTICS CANADA LTD., DATED MAY 2017 (REFER TO DRAWING 4 FOR TECHNICAL RECOMMENDATIONS).
 17. BLASTING INFORMATION WAS OBTAINED FROM BLAST IMPACT ANALYSIS REPORT BY EXPLOITION DATED MAY 2017 (REFER TO DRAWING 4 FOR TECHNICAL RECOMMENDATIONS).

KEY MAP



LEGEND

- 150m INFORMATION BOUNDARY
- BOUNDARY OF AREA TO BE LICENCED
- BOUNDARY OF EXISTING ADJACENT LICENCE
- PROPERTY LINE
- LOT/CONCESSION LINE
- REGULATORY SETBACK LINE
- LIMIT OF EXTRACTION
- EXISTING FENCE
- EXISTING WATERCOURSE
- EXISTING VEGETATION
- EXISTING WETLAND
- EXISTING OPEN WATER
- EXISTING 5m CONTOUR LINE
- EXISTING 1m CONTOUR LINE
- EXISTING SPOT ELEVATION
- EXISTING QUARRY OPERATION
- EXISTING BUILDING AND NUMBER
- EXISTING HYDRO POLE
- DIRECTION OF SURFACE WATER DRAINAGE
- MONITORING WELL INSTALLED AND BOREHOLE DUG BY APPLICANT ON FEBRUARY 27, 2016
- EXISTING WELLS

BUILDING LIST

1	HOUSE
2	GARAGE
3	GARAGE
4	SHED
5	STORGE
6	RECREATION BUILDING
7	TOWER BUILDING
8	HOUSE
9	SHED
10	SHED
11	SHED
12	STORAGE BUILDING
13	GARAGE
14	HOUSE

SITE PLAN OVERRIDE (VARIANCE)

- THE FOLLOWING CONDITIONS ILLUSTRATED ON THIS PLAN HAVE VARY FROM THE OF THE PROVINCIAL STANDARDS MADE UNDER THE AGGREGATE RESOURCES ACT:
1. SETBACK ALONG SOUTH BOUNDARY IS REDUCED TO 5m AS PER AGREEMENT WITH ADJACENT LICENCE. SETBACK ALONG EAST BOUNDARY IS REDUCED TO 5m. LICENCEE OWNS ADJACENT LAND. S.151
 2. FENCING OMITTED ALONG SOUTH BOUNDARY AS PER AGREEMENT WITH ADJACENT LICENCEE AND ALONG NORTH BOUNDARY EAST OF WETLAND TO NORTHEAST CORNER AND EAST BOUNDARY DUE TO TOPOGRAPHY. S.1

Pre Licence Review	Site Plan Amendments
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Offices in Markham & Cambridge

Project Name

ROCKRIDGE QUARRY

LICENCE No. _____

APPLICANT'S SIGNATURE _____

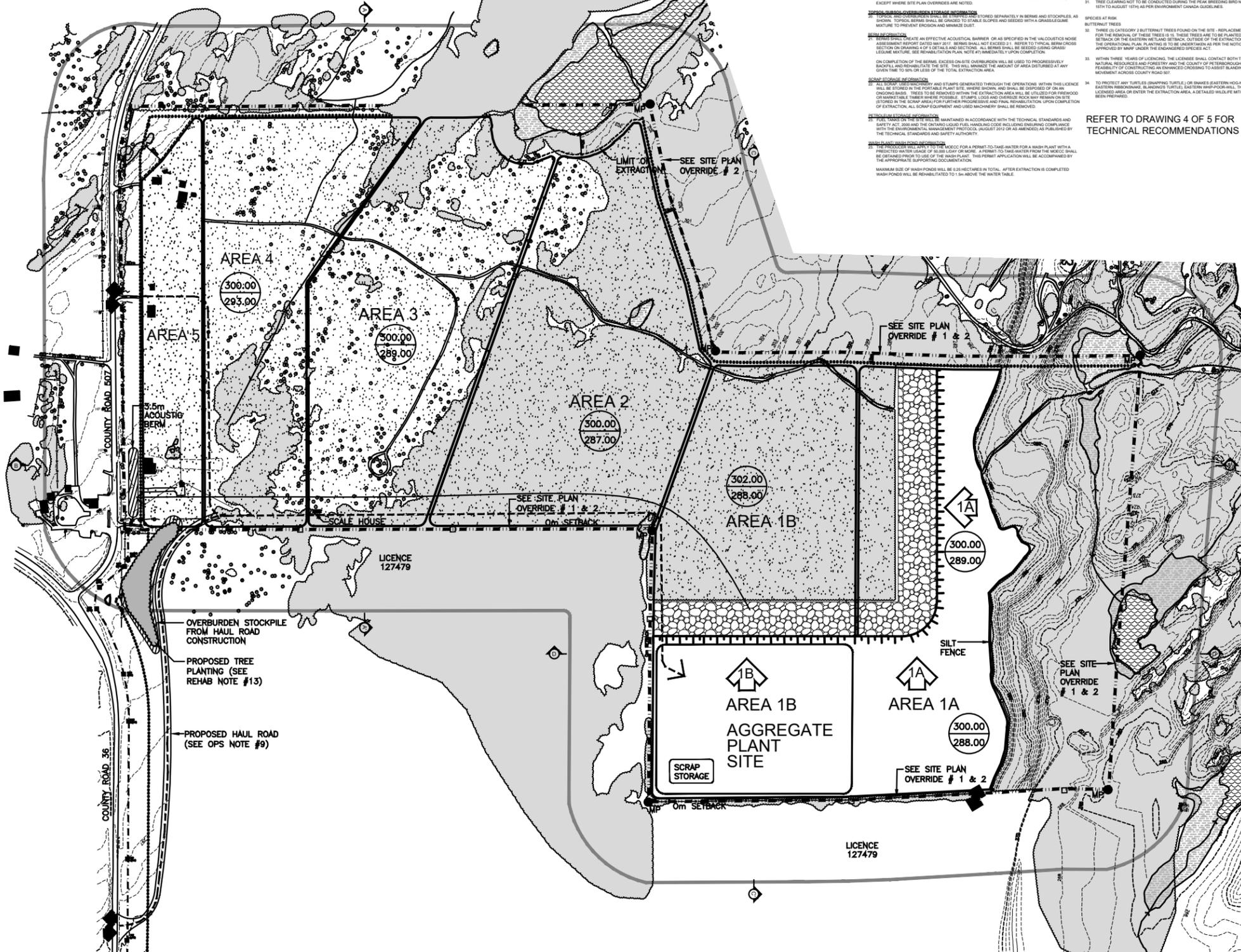
LOT 21, CONCESSION 8, (FORMERLY GALWAY-CAVENDISH & HARVEY TOWNSHIP) MUNICIPALITY OF TREAT LAKES, COUNTY OF PETERBOROUGH

Scale 1:2000	North	Stamp
Drawing Status PRELIMINARY FOR DISCUSSION		
Drawn S.B./A.C.	Checked G.D.H./M.H.	Issue Date JUNE 2017
Drawing Title EXISTING FEATURES PLAN	Project Number 16-01	Drawing Number 1 OF 5

DATE PLOTTED: 2017-06-01 10:23:11

PHASE A

1. ESTABLISH MAIN COMMERCIAL ENTRANCE TO COUNTY ROAD 36 AND SECONDARY ENTRANCE TO QUARRY ROAD BY CONSTRUCTION TO APPROXIMATELY 1:100 SCALE. SCALE HOUSE AS SHOWN ON THE SITE PLAN AND HAUL ROAD INTO THE SITE.
2. USE STRIPPED MATERIAL FROM ROAD CONSTRUCTION TO CONSTRUCT STOCKPILE ALONG NORTHEAST PORTION OF HAUL ROAD. STOCKPILE TO BE SEEDS AND PLANTED WITH TREES (SEE REHABILITATION NOTE 11 ON PAGE 5).
3. PRIOR TO EXTRACTION COMMENCING IN AREA 1A AND 1B, CONSTRUCT OR UPGRADE THE FENCING ALONG THE WEST AND PART OF THE NORTH BOUNDARIES OF THE SITE TO THE STANDARD OF THE ACT AS REQUIRED. INSTALL 1.8M TENSION FENCING ALONG NORTHERN BOUNDARIES AS SHOWN.
4. STRIP TOPSOIL AND OVERBURDEN SEPARATELY FROM AREA 1A AND 1B AND CONSTRUCT WEST ACQUISIT BERM AS PER NOISE REPORT TECHNICAL RECOMMENDATIONS, PAGE 4.
5. PRIOR TO DIMENSION STONE EXTRACTION BEGINNING IN AREA 1, INSTALL SILT FENCE AT OUTLINE OF THESE AREAS ALONG EAST BOUNDARY. SILT FENCE WILL BE INSTALLED PROGRESSIVELY AS STRIPPING MOVES IN A NORTHERLY DIRECTION. BEGIN DIMENSION STONE EXTRACTION IN AREA 1A AND 1B IN DIRECTION SHOWN. TRANSPORT WASTE ROCK TO PROCESSING PLANT FOR PROCESSING.
6. BEGIN EXTRACTION IN AREA 1A AND 1B IN DIRECTION SHOWN USING A SINKING CUT TO ESTABLISH THE QUARRY FLOOR AND FACE. AND PROCESS THE ROCK IN ORDER TO PRODUCE A VARIETY OF MATERIALS TO MEET MARKET DEMANDS. PORTABLE PROCESSING PLANT AND STOCKPILING AREA WILL BE LOCATED IN AREA 1B.
7. CONTINUE EXTRACTION OF AREA 1A IN THE DIRECTIONS SHOWN AND PROCESS AND STOCKPILE MATERIALS ON THE QUARRY FLOOR.
8. AREAS 1, 3, 4, AND 5 REMAIN UNDISTURBED.

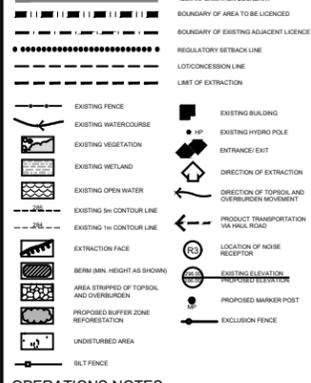


OPERATIONS NOTES

- HYDROGEOLOGICAL INFORMATION**
13. HYDROGEOLOGICAL INFORMATION INCLUDING GROUNDWATER ELEVATION WAS OBTAINED FROM REPORT BY WSP (NOVEMBER 2017).
 14. SURFACE DRAINAGE ON THE QUARRY FLOOR WILL BE DIRECTED TO LOW AREAS FOR WATER TO INFILTRATE AND EXISTING WETLANDS.
- NOISE MITIGATION INFORMATION**
15. OPERATIONS AND TESTING OF ALL IMPORTED MATERIAL SHALL BE PERFORMED AT SOURCE PRIOR TO THE IMPORTATION OF MATERIAL ONTO THE LICENSED SITE BY A SP UNDER EPA. QP WILL ALSO DESIRED MONITORING PROGRAM PER 11 NOTES) RANDOM SAMPLING OF ALL IMPORTED MATERIAL SHALL BE CONDUCTED AT THE REQUEST OF MNRF.
 16. OPERATIONS AND TESTING OF ALL IMPORTED MATERIAL SHALL BE PERFORMED AT SOURCE PRIOR TO THE IMPORTATION OF MATERIAL ONTO THE LICENSED SITE BY A SP UNDER EPA. QP WILL ALSO DESIRED MONITORING PROGRAM PER 11 NOTES) RANDOM SAMPLING OF ALL IMPORTED MATERIAL SHALL BE CONDUCTED AT THE REQUEST OF MNRF.
- AIR QUALITY INFORMATION**
17. OPERATIONS AND TESTING OF ALL IMPORTED MATERIAL SHALL BE PERFORMED AT SOURCE PRIOR TO THE IMPORTATION OF MATERIAL ONTO THE LICENSED SITE BY A SP UNDER EPA. QP WILL ALSO DESIRED MONITORING PROGRAM PER 11 NOTES) RANDOM SAMPLING OF ALL IMPORTED MATERIAL SHALL BE CONDUCTED AT THE REQUEST OF MNRF.
- SITE MANAGEMENT INFORMATION**
18. OPERATIONS AND TESTING OF ALL IMPORTED MATERIAL SHALL BE PERFORMED AT SOURCE PRIOR TO THE IMPORTATION OF MATERIAL ONTO THE LICENSED SITE BY A SP UNDER EPA. QP WILL ALSO DESIRED MONITORING PROGRAM PER 11 NOTES) RANDOM SAMPLING OF ALL IMPORTED MATERIAL SHALL BE CONDUCTED AT THE REQUEST OF MNRF.
- WETLANDS**
19. OPERATIONS AND TESTING OF ALL IMPORTED MATERIAL SHALL BE PERFORMED AT SOURCE PRIOR TO THE IMPORTATION OF MATERIAL ONTO THE LICENSED SITE BY A SP UNDER EPA. QP WILL ALSO DESIRED MONITORING PROGRAM PER 11 NOTES) RANDOM SAMPLING OF ALL IMPORTED MATERIAL SHALL BE CONDUCTED AT THE REQUEST OF MNRF.
- WETLANDS**
20. OPERATIONS AND TESTING OF ALL IMPORTED MATERIAL SHALL BE PERFORMED AT SOURCE PRIOR TO THE IMPORTATION OF MATERIAL ONTO THE LICENSED SITE BY A SP UNDER EPA. QP WILL ALSO DESIRED MONITORING PROGRAM PER 11 NOTES) RANDOM SAMPLING OF ALL IMPORTED MATERIAL SHALL BE CONDUCTED AT THE REQUEST OF MNRF.
- WETLANDS**
21. OPERATIONS AND TESTING OF ALL IMPORTED MATERIAL SHALL BE PERFORMED AT SOURCE PRIOR TO THE IMPORTATION OF MATERIAL ONTO THE LICENSED SITE BY A SP UNDER EPA. QP WILL ALSO DESIRED MONITORING PROGRAM PER 11 NOTES) RANDOM SAMPLING OF ALL IMPORTED MATERIAL SHALL BE CONDUCTED AT THE REQUEST OF MNRF.
- WETLANDS**
22. OPERATIONS AND TESTING OF ALL IMPORTED MATERIAL SHALL BE PERFORMED AT SOURCE PRIOR TO THE IMPORTATION OF MATERIAL ONTO THE LICENSED SITE BY A SP UNDER EPA. QP WILL ALSO DESIRED MONITORING PROGRAM PER 11 NOTES) RANDOM SAMPLING OF ALL IMPORTED MATERIAL SHALL BE CONDUCTED AT THE REQUEST OF MNRF.
- WETLANDS**
23. OPERATIONS AND TESTING OF ALL IMPORTED MATERIAL SHALL BE PERFORMED AT SOURCE PRIOR TO THE IMPORTATION OF MATERIAL ONTO THE LICENSED SITE BY A SP UNDER EPA. QP WILL ALSO DESIRED MONITORING PROGRAM PER 11 NOTES) RANDOM SAMPLING OF ALL IMPORTED MATERIAL SHALL BE CONDUCTED AT THE REQUEST OF MNRF.
- WETLANDS**
24. OPERATIONS AND TESTING OF ALL IMPORTED MATERIAL SHALL BE PERFORMED AT SOURCE PRIOR TO THE IMPORTATION OF MATERIAL ONTO THE LICENSED SITE BY A SP UNDER EPA. QP WILL ALSO DESIRED MONITORING PROGRAM PER 11 NOTES) RANDOM SAMPLING OF ALL IMPORTED MATERIAL SHALL BE CONDUCTED AT THE REQUEST OF MNRF.
- WETLANDS**
25. OPERATIONS AND TESTING OF ALL IMPORTED MATERIAL SHALL BE PERFORMED AT SOURCE PRIOR TO THE IMPORTATION OF MATERIAL ONTO THE LICENSED SITE BY A SP UNDER EPA. QP WILL ALSO DESIRED MONITORING PROGRAM PER 11 NOTES) RANDOM SAMPLING OF ALL IMPORTED MATERIAL SHALL BE CONDUCTED AT THE REQUEST OF MNRF.
- WETLANDS**
26. OPERATIONS AND TESTING OF ALL IMPORTED MATERIAL SHALL BE PERFORMED AT SOURCE PRIOR TO THE IMPORTATION OF MATERIAL ONTO THE LICENSED SITE BY A SP UNDER EPA. QP WILL ALSO DESIRED MONITORING PROGRAM PER 11 NOTES) RANDOM SAMPLING OF ALL IMPORTED MATERIAL SHALL BE CONDUCTED AT THE REQUEST OF MNRF.
- WETLANDS**
27. OPERATIONS AND TESTING OF ALL IMPORTED MATERIAL SHALL BE PERFORMED AT SOURCE PRIOR TO THE IMPORTATION OF MATERIAL ONTO THE LICENSED SITE BY A SP UNDER EPA. QP WILL ALSO DESIRED MONITORING PROGRAM PER 11 NOTES) RANDOM SAMPLING OF ALL IMPORTED MATERIAL SHALL BE CONDUCTED AT THE REQUEST OF MNRF.
- WETLANDS**
28. OPERATIONS AND TESTING OF ALL IMPORTED MATERIAL SHALL BE PERFORMED AT SOURCE PRIOR TO THE IMPORTATION OF MATERIAL ONTO THE LICENSED SITE BY A SP UNDER EPA. QP WILL ALSO DESIRED MONITORING PROGRAM PER 11 NOTES) RANDOM SAMPLING OF ALL IMPORTED MATERIAL SHALL BE CONDUCTED AT THE REQUEST OF MNRF.
- WETLANDS**
29. OPERATIONS AND TESTING OF ALL IMPORTED MATERIAL SHALL BE PERFORMED AT SOURCE PRIOR TO THE IMPORTATION OF MATERIAL ONTO THE LICENSED SITE BY A SP UNDER EPA. QP WILL ALSO DESIRED MONITORING PROGRAM PER 11 NOTES) RANDOM SAMPLING OF ALL IMPORTED MATERIAL SHALL BE CONDUCTED AT THE REQUEST OF MNRF.
- WETLANDS**
30. OPERATIONS AND TESTING OF ALL IMPORTED MATERIAL SHALL BE PERFORMED AT SOURCE PRIOR TO THE IMPORTATION OF MATERIAL ONTO THE LICENSED SITE BY A SP UNDER EPA. QP WILL ALSO DESIRED MONITORING PROGRAM PER 11 NOTES) RANDOM SAMPLING OF ALL IMPORTED MATERIAL SHALL BE CONDUCTED AT THE REQUEST OF MNRF.
- WETLANDS**
31. OPERATIONS AND TESTING OF ALL IMPORTED MATERIAL SHALL BE PERFORMED AT SOURCE PRIOR TO THE IMPORTATION OF MATERIAL ONTO THE LICENSED SITE BY A SP UNDER EPA. QP WILL ALSO DESIRED MONITORING PROGRAM PER 11 NOTES) RANDOM SAMPLING OF ALL IMPORTED MATERIAL SHALL BE CONDUCTED AT THE REQUEST OF MNRF.
- WETLANDS**
32. OPERATIONS AND TESTING OF ALL IMPORTED MATERIAL SHALL BE PERFORMED AT SOURCE PRIOR TO THE IMPORTATION OF MATERIAL ONTO THE LICENSED SITE BY A SP UNDER EPA. QP WILL ALSO DESIRED MONITORING PROGRAM PER 11 NOTES) RANDOM SAMPLING OF ALL IMPORTED MATERIAL SHALL BE CONDUCTED AT THE REQUEST OF MNRF.
- WETLANDS**
33. OPERATIONS AND TESTING OF ALL IMPORTED MATERIAL SHALL BE PERFORMED AT SOURCE PRIOR TO THE IMPORTATION OF MATERIAL ONTO THE LICENSED SITE BY A SP UNDER EPA. QP WILL ALSO DESIRED MONITORING PROGRAM PER 11 NOTES) RANDOM SAMPLING OF ALL IMPORTED MATERIAL SHALL BE CONDUCTED AT THE REQUEST OF MNRF.
- WETLANDS**
34. OPERATIONS AND TESTING OF ALL IMPORTED MATERIAL SHALL BE PERFORMED AT SOURCE PRIOR TO THE IMPORTATION OF MATERIAL ONTO THE LICENSED SITE BY A SP UNDER EPA. QP WILL ALSO DESIRED MONITORING PROGRAM PER 11 NOTES) RANDOM SAMPLING OF ALL IMPORTED MATERIAL SHALL BE CONDUCTED AT THE REQUEST OF MNRF.

REFER TO DRAWING 4 OF 5 FOR TECHNICAL RECOMMENDATIONS

LEGEND



OPERATIONS NOTES

- GENERAL INFORMATION**
1. OPERATIONS AND TESTING OF ALL IMPORTED MATERIAL SHALL BE PERFORMED AT SOURCE PRIOR TO THE IMPORTATION OF MATERIAL ONTO THE LICENSED SITE BY A SP UNDER EPA. QP WILL ALSO DESIRED MONITORING PROGRAM PER 11 NOTES) RANDOM SAMPLING OF ALL IMPORTED MATERIAL SHALL BE CONDUCTED AT THE REQUEST OF MNRF.
- RESOURCE INFORMATION**
1. OPERATIONS AND TESTING OF ALL IMPORTED MATERIAL SHALL BE PERFORMED AT SOURCE PRIOR TO THE IMPORTATION OF MATERIAL ONTO THE LICENSED SITE BY A SP UNDER EPA. QP WILL ALSO DESIRED MONITORING PROGRAM PER 11 NOTES) RANDOM SAMPLING OF ALL IMPORTED MATERIAL SHALL BE CONDUCTED AT THE REQUEST OF MNRF.

- EXTRACTION/PROCESSING/HAULING INFORMATION**
1. OPERATIONS AND TESTING OF ALL IMPORTED MATERIAL SHALL BE PERFORMED AT SOURCE PRIOR TO THE IMPORTATION OF MATERIAL ONTO THE LICENSED SITE BY A SP UNDER EPA. QP WILL ALSO DESIRED MONITORING PROGRAM PER 11 NOTES) RANDOM SAMPLING OF ALL IMPORTED MATERIAL SHALL BE CONDUCTED AT THE REQUEST OF MNRF.

- SITE PLAN OVERRIDE (VARIANCE)**
1. OPERATIONS AND TESTING OF ALL IMPORTED MATERIAL SHALL BE PERFORMED AT SOURCE PRIOR TO THE IMPORTATION OF MATERIAL ONTO THE LICENSED SITE BY A SP UNDER EPA. QP WILL ALSO DESIRED MONITORING PROGRAM PER 11 NOTES) RANDOM SAMPLING OF ALL IMPORTED MATERIAL SHALL BE CONDUCTED AT THE REQUEST OF MNRF.

BOUNDARY	DESCRIPTION	REMARKS
1	WETBACK ALONG SOUTH BOUNDARY IS REDUCED TO 3m AS PER AGREEMENT WITH ADJACENT LICENSEE. ACCESS SHALL BE VIA AN ENTRANCE OFF COUNTY ROAD 36 SUBJECT TO SITE PLAN AMENDMENT APPROVAL FOR LICENCE NO. 127479. THIS ENTRY WILL BE MAINTAINED. ONE AT COUNTY ROAD 36 ENTRANCE AND ONE INTERNAL GATE AT THE SCALE HOUSE TO FACILITATE PARKING IF NECESSARY AND REDUCE THE NEED TO PARK ON THE SHOULDER OF COUNTY ROAD 36.	5.10.1
2	FENCING OMITTED ALONG SOUTH BOUNDARY AS PER AGREEMENT WITH ADJACENT LICENSEE. ALONG NORTHEAST BOUNDARY FROM WETLAND TO NORTHEAST CORNER AND EAST BOUNDARY DUE TO TOPOGRAPHICAL CONDITIONS.	5.1

Pre Licence Review

Site Plan Amendments

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www.arington.com
Office in Markham & Cambridge

Project Name

ROCKRIDGE QUARRY

LICENCE No. 127479

APPLICANT'S SIGNATURE

LOT 21, CONCESSION 6, (FORMERLY GALWAY-CAMDENSH & HARVEY TOWNSHIP) MUNICIPALITY OF TRENT LAKES, COUNTY OF PETERBOROUGH

Scale 1:2000

North

Stamp

Drawing Status

PRELIMINARY FOR DISCUSSION

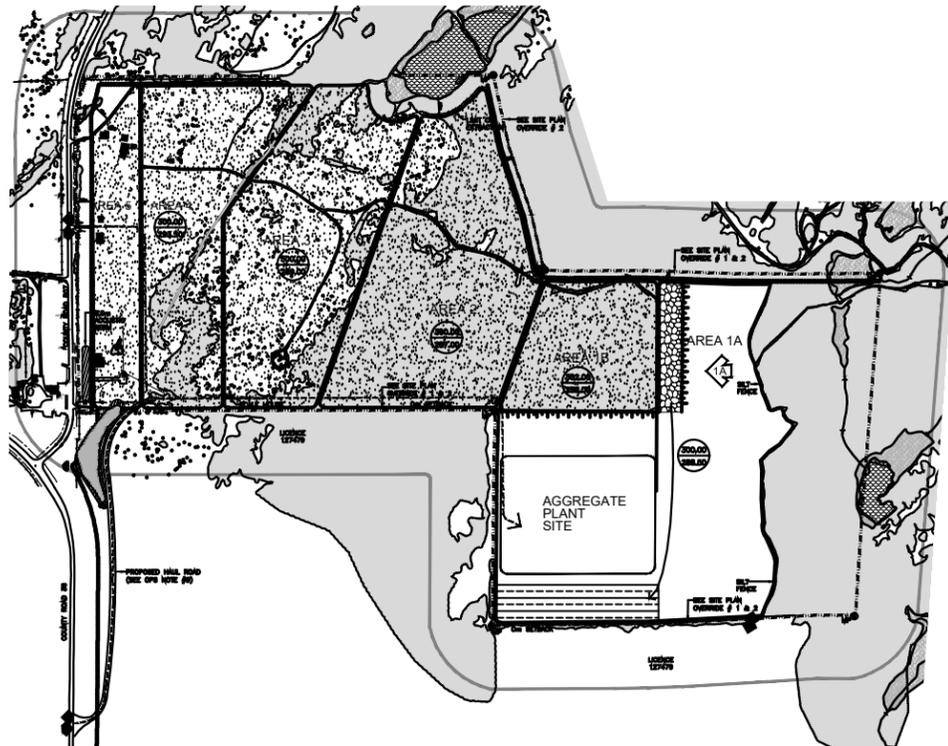
Drawn A.C./S.B. Checked G.D.H./M.H. Issue Date JUNE 2017

Drawing Title

OPERATIONAL PLAN PHASE A

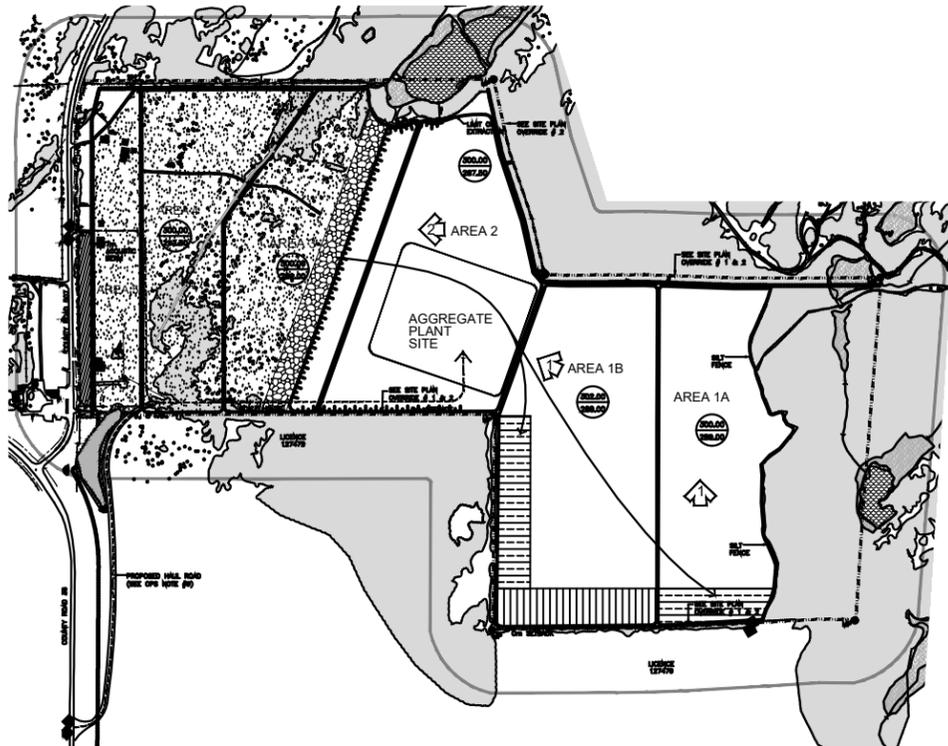
Project Number 16-01

Drawing Number 2 OF 5



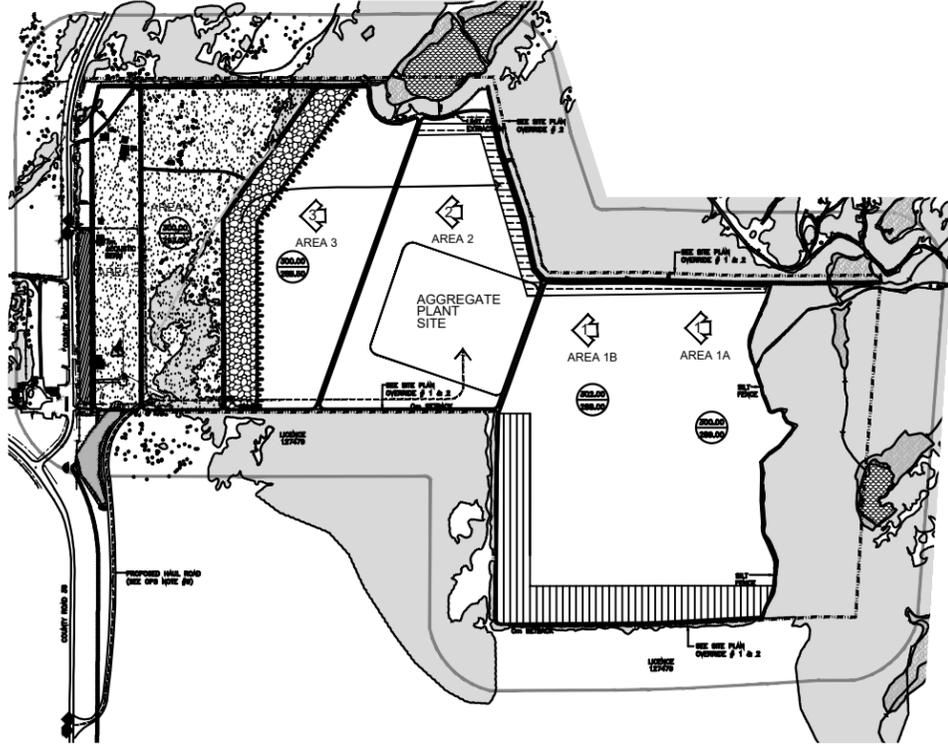
PHASE B
PHASE B NOTES

1. CONTINUE STRIPPING OF TOPSOIL AND OVERBURDEN SEPARATELY FROM AREA 1A AND 1B AND BEGIN PROGRESSIVE REHABILITATION OF AREA 1A.
2. CREATE TALUS SLOPE AT THE EAST SLOPE FACE USING WASTE ROCK FROM DIMENSION STONE OPERATIONS. INCORPORATE WOODY MATERIAL INTO THE SURFACE OF THE TALUS SLOPE FOR HABITAT CREATION.
3. EXTEND DIMENSION STONE OPERATIONS TO THE NORTHERN PORTION OF AREA 1B.
4. CONTINUE EXTRACTION OF DIMENSION STONE AND CONSTRUCTION AGGREGATE IN AREA 1A AND 1B.
5. MAINTAIN ALL VEGETATION IN A HEALTHY, VIGOROUS CONDITION.
6. AREAS 2, 3, 4, AND 5 WILL REMAIN UNDISTURBED.



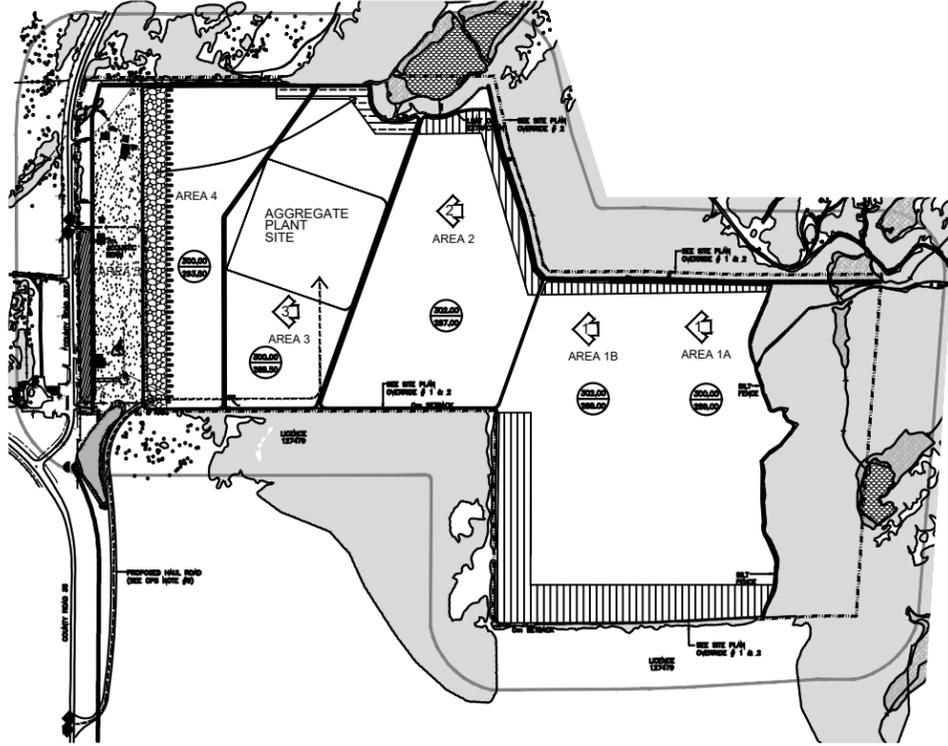
PHASE C
PHASE C NOTES

1. CONTINUE EXTRACTION OF AREA 1A AND 1B.
2. BEGIN STRIPPING OF TOPSOIL AND OVERBURDEN SEPARATELY FROM AREA 2 AND USE TO CONTINUE CONSTRUCTION OF ADJUSTED BERM AS PER NOISE TECHNICAL RECOMMENDATIONS, PAGE 4) AND CONTINUE PROGRESSIVE REHABILITATION OF TALUS SLOPES IN AREA 1B AND BEGIN PROGRESSIVE REHABILITATION OF TALUS SLOPE IN AREA 1A.
3. MOVE PLANT SITE TO AREA 2.
4. MAINTAIN ALL VEGETATION IN A HEALTHY, VIGOROUS CONDITION.
5. AREA 3, 4, AND 5 WILL REMAIN UNDISTURBED.



PHASE D
PHASE D NOTES

1. BEGIN STRIPPING OF TOPSOIL AND OVERBURDEN SEPARATELY FROM AREA 3 AND USE TO BEGIN PROGRESSIVE REHABILITATION OF TALUS SLOPES IN NORTHERN PART OF AREA 1A, 1B, AND 2.
2. BEGIN EXTRACTION OF DIMENSION STONE IN AREA 2 IN THE DIRECTION SHOWN.
3. BEGIN EXTRACTION OF CONSTRUCTION AGGREGATE IN AREA 2.
4. MAINTAIN ALL VEGETATION IN A HEALTHY, VIGOROUS CONDITION.
5. AREA 4 AND 5 WILL REMAIN UNDISTURBED.



PHASE E
PHASE E NOTES

1. BEGIN STRIPPING OF TOPSOIL AND OVERBURDEN SEPARATELY FROM AREA 4 AND USE TO CONTINUE CONSTRUCTION OF ADJUSTED BERMS AS PER NOISE TECHNICAL RECOMMENDATIONS, PAGE 4) AND CONTINUE PROGRESSIVE REHABILITATION OF TALUS SLOPES IN AREA 4.
2. MOVE PLANT SITE TO AREA 3.
3. CONTINUE EXTRACTION OF DIMENSION STONE IN AREA 3 IN THE DIRECTION SHOWN.
4. BEGIN EXTRACTION OF CONSTRUCTION AGGREGATE IN AREA 3, IN THE DIRECTION SHOWN.
5. MAINTAIN ALL VEGETATION IN A HEALTHY, VIGOROUS CONDITION.

PHASE F (NOT SHOWN)
PHASE F NOTES

1. CONTINUE STRIPPING OF TOPSOIL AND OVERBURDEN SEPARATELY FROM AREA 4 AND USE TO CONTINUE CONSTRUCTION OF ADJUSTED BERMS AS PER NOISE TECHNICAL RECOMMENDATIONS, PAGE 4) AND CONTINUE PROGRESSIVE REHABILITATION OF TALUS SLOPES IN AREA 4.
2. MOVE PLANT SITE TO AREA 3.
3. CONTINUE EXTRACTION OF DIMENSION STONE AND CONSTRUCTION AGGREGATE IN AREA 4 AND BEGIN EXTRACTION OF DIMENSION STONE IN AREA 4.
4. CONTINUE EXTRACTION OF DIMENSION STONE IN AREA 4 AND BEGIN STRIPPING OF TOPSOIL AND OVERBURDEN SEPARATELY FROM AREA 4 AND USE TO BEGIN PROGRESSIVE REHABILITATION OF TALUS SLOPES IN AREA 4 AND QUARRY FLOOR IN AREA 1A, 1B.
5. CONTINUE EXTRACTION OF CONSTRUCTION AGGREGATE IN AREA 4.
6. COMPLETE THE REHABILITATION OF SIDE SLOPES AND QUARRY FLOOR USING TOPSOIL AND OVER BURDEN STORED IN ACCIDENTAL AND PERIMETER BERMS.
7. UPON COMPLETION OF EXTRACTION REMOVE ALL EQUIPMENT, STOCKPILES, BERM AND MACHINERY FROM SITE.
8. FORMALIZATIONS TONER AND ADMINISTRATION BUILDING AREA IS EXTRACTED, IT WILL BE REHABILITATED TO BLEND WITH REHABILITATION CONTOURS OF SURROUNDING AREA.

LEGEND

	10m INFORMATION BOUNDARY		EXISTING BUILDING
	BOUNDARY OF AREA TO BE LICENCED		EXISTING HYDRO POLE
	REGULATORY SETBACK LINE		ENTRANCE EXIT
	LIMIT OF EXTRACTION		DIRECTION OF EXTRACTION
			DIRECTION OF TOPSOIL, OVERBURDEN, AND ORGANIC MATERIALS MOVEMENT
			PRODUCT TRANSPORTATION VIA TRAIL ROAD
			LOCATION OF NOISE RECEPTOR
			EXISTING ELEVATION PROPOSED ELEVATION
			PROPOSED MARKER POST
			EXISTING FENCE
			EXISTING WATERCOURSE
			EXISTING VEGETATION
			EXISTING METLAND
			EXISTING OPEN WATER
			EXTRACTION FACE
			BERM (MIN. HEIGHT AS SHOWN)
			UNDISTURBED AREA
			AREA STRIPPED OF TOPSOIL AND OVERBURDEN
			AREA UNDER REHABILITATION
			REHABILITATION COMPLETE
			PROPOSED BUFFER ZONE
			REFORESTATION
			SILT FENCE

SITE PLAN OVERRIDE (VARIANCE)

THE FOLLOWING CONDITIONS ILLUSTRATED ON THESE PLANS VARY FROM THE OF THE PROVINCIAL STANDARDS MADE UNDER THE AGGREGATE RESOURCES ACT:

1. SETBACK ALONG SOUTH BOUNDARY IS REDUCED TO 5m AS PER AGREEMENT WITH ADJACENT LANDOWNER. SETBACK ALONG EAST BOUNDARY IS REDUCED TO 5m, LICENSÉE OWNS ADJACENT LAND.	S.16
2. FENCING OMITTED ALONG SOUTH BOUNDARY AS PER AGREEMENT WITH ADJACENT LANDOWNER. ALONG NORTHEAST BOUNDARY FROM BE-LAND TO NORTHEAST CORNER AS PER AGREEMENT WITH ADJACENT LANDOWNER, AND ALONG EAST BOUNDARY DUE TO TOPOGRAPHY.	S.1

Scale	1:4000
North	North
Stamp	

Pre Licence Review

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www.avanlimited.com
Offices in Markham & Cambridge

Project Name

ROCKRIDGE QUARRY

LICENCE No. _____

APPLICANT'S SIGNATURE

LOT 21, CONCESSION 5, (FORMERLY GALWAY-CAVENDISH & HARVEY TOWNSHIP MUNICIPALITY OF TRENT LAKES, COUNTY OF PETERBOROUGH

Scale 1:4000 North Stamp

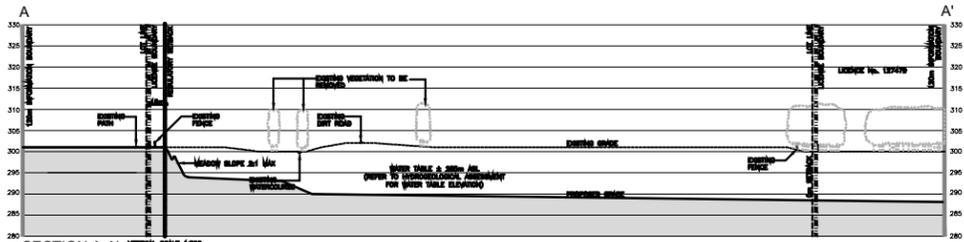
Drawing Status: PRELIMINARY FOR DISCUSSION

Drawn: A.C./S.B. Checked: G.D.H./M.H. Issue Date: JUNE 2017

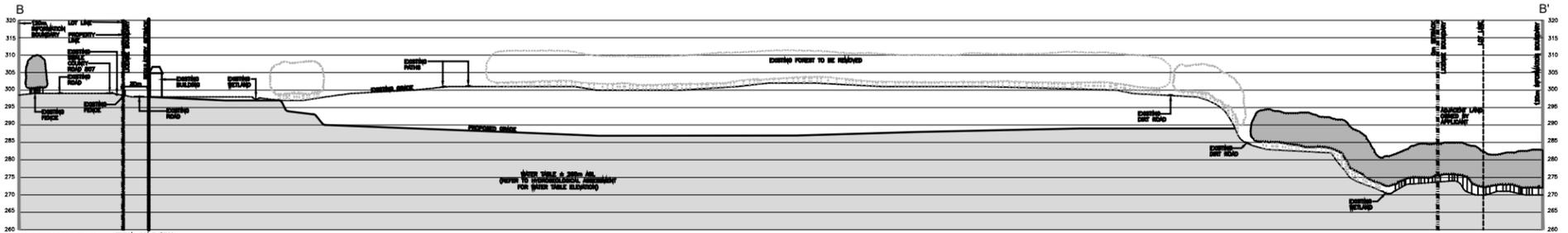
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Project Number: 16-01

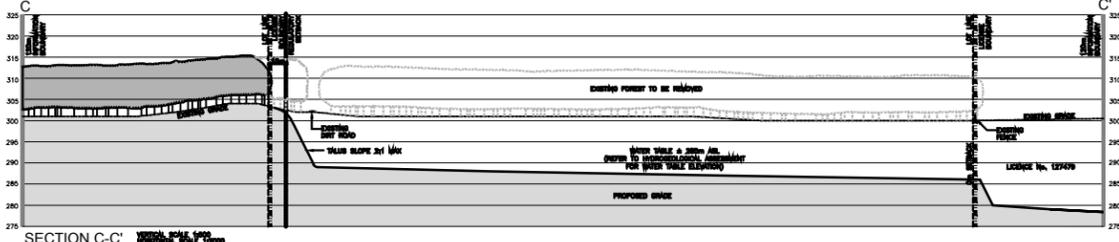
Drawing Number: 3 OF 5



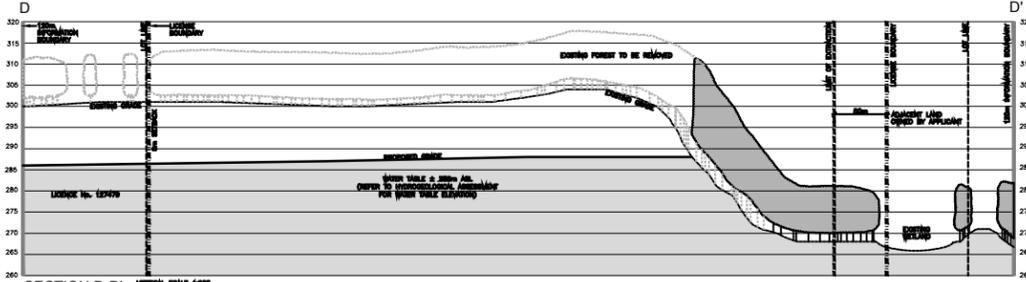
SECTION A-A'



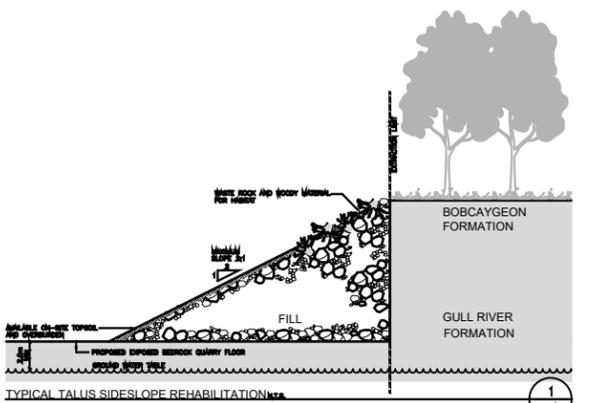
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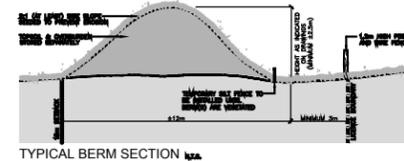
SECTION C-C'



SECTION D-D'



TYPICAL TALUS SIDESLOPE REHABILITATION



TYPICAL BERM SECTION

TECHNICAL RECOMMENDATIONS

THE FOLLOWING ARE THE TECHNICAL RECOMMENDATIONS FROM ALL OF THE EXPERTS REPORTS AS OF MAY 2017. ADDITIONAL RECOMMENDATIONS MAY BE INCLUDED AS A RESULT OF THE LICENCE REVIEW PROCESS.

ARCHAEOLOGICAL ASSESSMENT - WSP DATED MARCH 14, 2017

1. STAGE 2 TEST PIT SURVEY IS REQUIRED FOR UNLISTED LANDS LOCATED WITHIN 50M OF THE HISTORIC QUARRY ROAD, 50M FROM HISTORIC ARCHAEOLOGICAL SITE 8000-10, AND 50M FROM IDENTIFIED (SOUTH AND NORTH) OF THE STUDY AREA (FIGURE 3).

HYDROLOGICAL ASSESSMENT - WSP DATED MAY 2017

WATER LEVEL MONITORING SHALL BE CONDUCTED DURING QUARRY DEVELOPMENT TO VERIFY THAT THE PROPOSED BASE LEVEL FOR THE QUARRY IS SATISFACTORILY MONITORING SHALL ALSO ASSESS POTENTIAL IMPACTS OF THE QUARRY ON THE SURROUNDING GROUNDWATER AND OVERPRESSURE. AN ADAPTIVE MANAGEMENT PLAN IS DISCUSSED BELOW. IF NECESSARY, ADDITIONAL MONITORING WELLS CAN BE INSTALLED DURING QUARRY DEVELOPMENT TO FURTHER ASSESS GROUNDWATER RESPONSE TO EXTRACTION.

WATER LEVEL MONITORING PROGRAM

MONITORING OF WATER LEVELS IN ALL EXISTING AND OFF-SITE MONITORING WELLS AND DOMESTIC WELLS, INCLUDING WELLS AT THE STONE CREEK AND BURNHOUSE QUARRIES, WILL OCCUR AT A MINIMUM FREQUENCY OF FOUR TIMES PER YEAR (I.E. QUARTERLY).

- COMPLETE A BASELINE DOOR-TO-DOOR SURVEY OF ADJACENT DOMESTIC WELLS PRIOR TO THE START OF EXTRACTION TO OBTAIN INFORMATION ON WELL USE AND CONSTRUCTION DETAILS (AS NOTED EARLIER, INFORMATION FOR MOST LOCAL WELLS IS ALREADY KNOWN).
- PREPARE AND SUBMIT AN ANNUAL MONITORING REPORT DOCUMENTING AND DISCUSSING ALL FINDINGS, INCLUDING RECOMMENDATIONS TO ADJUST THE MONITORING PROGRAM IF REQUIRED. THE REPORT SHALL BE PREPARED, SIGNED AND SEALED BY A QUALIFIED HYDROLOGIST AND SUBMITTED TO WSP FOR REVIEW.

SHOULD THE ANNUAL MONITORING PROGRAM OR SITE CONDITIONS REVEAL CHANGES TO SURFACE OR GROUNDWATER CONDITIONS WHICH MAY WARRANT AN ADJUSTMENT IN THE DEPTH OF EXTRACTION OPERATIONS, A QUALIFIED HYDROLOGIST SHALL BE RETAINED TO ASSESS IF DEPTH ADJUSTMENTS TO THE SITE PLAN ARE REQUIRED IN ORDER TO ENSURE A MINIMUM 2m SEPARATION FROM THE GROUNDWATER TABLE.

COMPLAINT MANAGEMENT PLAN

TO PREVENT OR REDUCE THE POTENTIAL FOR UNWARRANTED COMPLAINTS, SHOULD ANY OCCUR AS QUARRY DEVELOPMENT PROCEEDS, IT IS RECOMMENDED THAT A COMPLAINT MANAGEMENT PLAN BE DEVELOPED AND IMPLEMENTED IN THE EVENT OF WATER OVERPRESSURE OR COMPLAINTS BY ADJACENT LANDOWNERS. UPON CONSULTATION WITH THE MINISTRY OF ENVIRONMENT AND CLIMATE CHANGE, THE PLAN SHOULD INCLUDE THE FOLLOWING COMPONENTS:

- INVESTIGATION OF THE COMPLAINT BY A QUALIFIED HYDROLOGIST;
- IF NECESSARY, PROVISION OF TEMPORARY WATER SUPPLIES WHILE THE INVESTIGATION IS UNDERWAY;
- IF NECESSARY, PROVISION OF REMEDIES IF COMPLAINTS ARE VALIDATED BY SCIENTIFIC EVIDENCE OF A CONNECTION TO QUARRY ACTIVITIES WITH SUCH REMEDIES TO INCLUDE IMMEDIATE SUSPENSION OF IMPACTFUL QUARRY ACTIVITIES LINKED TO THE PROBLEM AND/OR COMPENSATION FOR A REPLACEMENT WATER SUPPLY OF SUSTAINABLE PERFORMANCE.

WELLS MANAGEMENT PLAN

PRIOR TO EXTRACTION OPERATIONS, THE LICENSEE SHALL PROVIDE TO THE MINISTRY OF NATURAL RESOURCES AND FORESTRY A COMPLAINTS MANAGEMENT PLAN. THE PLAN SHALL INCLUDE, AS A MINIMUM, THE FOLLOWING INFORMATION AND A PROVISION TO IMMEDIATELY REPORT ANY SPILL TO THE WRECC SPILLS ACTION CENTER:

NATURAL ENVIRONMENT ASSESSMENT - HILLET ENVIRONMENTAL ASSOCIATES INC. MAY 2017

1. EXCAVATION OF TRENCHES TO OCCUR FORMER OF PEAK BEARING UNDER SEASIDE (APRIL 1974 TO AUGUST 1974) AS PER ENVIRONMENT CANADA GUIDELINES.

MONITORING

1. ANNUAL SURVEYS CONDUCTED FOR SNAKES AND TURTLES FROM TRAFFIC WITHIN QUARRY OPERATION.
2. FIVE (5) YEAR MONITORING PROGRAM PLAN AS PER ENDANGERED SPECIES ACT OVERALL BENEFIT POINT TO BE IMPLEMENTED TO ENHANCE HABITAT CREATED IS BENS USED BY WSP FOR WELLS EASTERN MEADOWLARK AND BARN SWALLOW.
3. VEGETATION MONITORING - SURVIVAL RATES ON REHABILITATION EFFORTS, SURVIVAL RATES ON BATTERED COMPENSATION PLANTINGS.

SPICES AT RISK

1. A QUALIFIED PROFESSIONAL BIOLOGIST SHALL CHECK THE INITIAL EXCAVATION AREA TO BE EXPOSED AND EXCAVATED PRIOR TO THE REMOVAL OF OVERBURDEN AND PROVIDE SPECIES AT RISK TRACING TO QUARRY SITE.
2. STOPPING AND EXCAVATION SHALL OCCUR ON THE LIMESTONE RIDGE, OUTSIDE THE SEASON WHEN SNAKES COULD BE IN HIBERNATION (OCTOBER - APRIL). TREE CLEARING MAY OCCUR DURING THIS TIME.
3. SNAKS THAT IDENTIFY THE POSSIBLE PRESENCE OF SPECIES AT RISK SHALL BE INSTALLED IN SUITABLE LOCATIONS IN THE SCALDINGS.
4. THE LICENSEE SHALL KEEP RECORDS OF SPECIES AT RISK ENCOUNTERS AND ACTIONS TAKEN.

PRIOR TO THE START OF AGGREGATE EXTRACTION, A 1.5 M HIGH BERM SHALL BE CONSTRUCTED AT THE SOUTHWEST CORNER OF THE SITE, AS SHOWN ON PAGE 2, TO PROVIDE ADDITIONAL SCREENING FOR THE HAUL TRUCKS ENTERING AND LEAVING THE SITE.

PRIOR TO AGGREGATE EXTRACTION OCCURRING IN AREA 2, THE BERM AT THE SOUTHWEST CORNER OF THE SITE SHALL BE INCREASED TO 2M IN HEIGHT AND EXTEND NORTHWARD, AS SHOWN ON PAGE 3.

PRIOR TO AGGREGATE EXTRACTION OCCURRING IN AREA 3, THE 7M HIGH BERM SHALL BE INCREASED TO 10M IN HEIGHT. IN ADDITION, A 6M HIGH BERM SHALL BE CONSTRUCTED TO THE NORTH OF THE 15M BERM, AS SHOWN ON FIGURE 4 IN THE REPORT.

2. THE FOLLOWING TABLE PRESENTS THE REFERENCE SOUND LEVELS USED FOR THE ACOUSTIC SOUND MONITORING SURVEY. THESE SOUND LEVELS WERE BASED ON SITE MEASUREMENTS OF EQUIPMENT OPERATING AT THE QUARRY SITE.

TABLE 2 - REFERENCE SOUND POWER LEVELS OF PROCESSING EQUIPMENT

EQUIPMENT	MAXIMUM SOUND EMISSION LEVEL
FRONT END LOADER	76 dBA AT 15m
ROCK DRILL	81 dBA AT 15m
EXCAVATOR	81 dBA AT 15m
DEDICATED HAUL TRUCKS	71 dBA AT 15m
AGGREGATE PROCESSING PLANT	81 dBA AT 15m
DUMPING TRUCKS	73 dBA AT 15m

EQUIPMENT THAT IS USED FOR CONSTRUCTION ACTIVITY ON THE SITE SHALL COMPLY WITH THE MAXIMUM EMISSION LIMITS OUTLINED IN WRECC PUBLICATION MPC-15.

3. PRIOR TO ANY ROCK DRILLING OPERATIONS, THE LICENSEE SHALL ENSURE THAT THE NOISE IMPACT OF THE DRILLING OPERATION IS ASSESSED BY A QUALIFIED PROFESSIONAL.
4. WHEN ANY NEW TYPE OF OPERATIONAL EQUIPMENT IS INTRODUCED TO THE SITE, THE NOISE EMISSIONS OF THIS EQUIPMENT SHALL BE ASSESSED BY A QUALIFIED ACOUSTICAL CONSULTANT TO ENSURE COMPLIANCE WITH THE WRECC 15M BERM REQUIREMENTS.
5. OPERATE NOISE ADJUST MEASUREMENTS TO BE COMPLETED WHEN DRILLING/PROCESSING ON SITE TO CONFIRM WRECC NOISE GUIDELINES ARE MET. THE ADJUST MEASUREMENTS MUST BE DONE BY A QUALIFIED ACOUSTICAL ENGINEER.

BLAST IMPACT ANALYSIS - EXPLORECHATED MARCH 2017

AS AN INDICATOR FOR RISK, BLASTS WILL BE CONDUCTED BY AN INDEPENDENT BLASTING CONSULTANT DURING THE FIRST 12 MONTHS OF OPERATION IN ORDER TO OBTAIN SUFFICIENT QUARRY DATA FOR THE DEVELOPMENT OF SITE SPECIFIC ATTENUATION RELATIONS. THIS STUDY WILL BE USED TO CONFIRM THE APPLICABILITY OF THE INITIAL GUIDELINE PARAMETERS AND ASSIST IN DEVELOPING FUTURE BLAST DESIGN.

2. ALL BLASTS SHALL BE MONITORED FOR BOTH GROUND VIBRATION AND OVERPRESSURE AT THE CLOSEST PRIVATELY OWNED SENSITIVE RECEPTOR ADJACENT TO THE SITE, OR CLOSER, WITH A MINIMUM OF TWO (2) DIGITAL SEISMOMETERS - ONE INSTALLED IN FRONT OF THE BLAST AND ONE INSTALLED BEHIND THE BLAST. MONITORING SHALL BE PERFORMED BY AN INDEPENDENT THIRD PARTY ENGINEERING FIRM WITH SPECIALIZATION IN BLASTING AND MONITORING.
3. BLASTS SHALL BE DESIGNED TO MAINTAIN VIBRATIONS AT THE RADIO TOWER AT AN COUNTY ROAD BE BELOW 10MM/S² (RMS). WHEN VIBRATION CALCULATIONS SUGGEST VIBRATIONS AT THE RADIO TOWER AT AN COUNTY ROAD 50T MAY EXCEED 10MM/S², THIS STRUCTURE SHALL ALSO BE MONITORED FOR GROUND VIBRATION AND OVERPRESSURE.
4. THE GUIDELINE LIMITS FOR VIBRATION AND OVERPRESSURE AS STIPULATED IN THE MODEL MUNICIPAL NOISE CONTROL BY LAW PUBLICATION MPC 119 SHALL BE ADHERED TO.

LEGEND

- 15m INFORMATION BOUNDARY
- BOUNDARY OF AREA TO BE LICENCED
- REGULATORY SETBACK LINE
- LIMIT OF EXTRACTION
- PROPERTY LINE
- LOT LINE

EXISTING GRADE
PROPOSED GRADE
EXISTING VEGETATION TO REMAIN
EXISTING VEGETATION TO BE REMOVED

SECTION NOTES
GENERAL INFORMATION

1. SECTION LINES ARE INDICATED ON DRAWINGS 1, 2, 3 AND 5.

SITE PLAN OVERRIDE (VARIANCE)

THE FOLLOWING CONDITIONS ILLUSTRATED ON THESE PLANS VARY FROM THE OF THE PROVINCIAL STANDARDS MADE UNDER THE AGGREGATE RESOURCES ACT.

1. SETBACK ALONG SOUTH BOUNDARY IS REDUCED TO 5M AS PER AGREEMENT WITH ADJACENT LICENSEE. SETBACK ALONG EAST BOUNDARY IS REDUCED TO 5M, LICENSEE OWNS ADJACENT LAND.
2. FENCING OMITTED ALONG SOUTH BOUNDARY AS PER AGREEMENT WITH ADJACENT LICENSEE. ALONG NORTHEAST BOUNDARY FROM BE LINE TO NORTHEAST CORNER AND EAST BOUNDARY DUE TO TOPOGRAPHICAL CONDITIONS.

NO.	DESCRIPTION	REASON
1	SETBACK ALONG SOUTH BOUNDARY IS REDUCED TO 5M AS PER AGREEMENT WITH ADJACENT LICENSEE. SETBACK ALONG EAST BOUNDARY IS REDUCED TO 5M, LICENSEE OWNS ADJACENT LAND.	S.16(1)
2	FENCING OMITTED ALONG SOUTH BOUNDARY AS PER AGREEMENT WITH ADJACENT LICENSEE. ALONG NORTHEAST BOUNDARY FROM BE LINE TO NORTHEAST CORNER AND EAST BOUNDARY DUE TO TOPOGRAPHICAL CONDITIONS.	S.1

Pre Licence Review
Site Plan Amendments

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Project Name

ROCKRIDGE QUARRY

LICENCE No. _____

APPLICANT'S SIGNATURE
LOT 21, CONCESSION 6, (FORMERLY GALWAY-GAVENISH & HARVEY TOWNSHIP MUNICIPALITY OF TRENT LAKES, COUNTY OF PETERBOROUGH

Scale	AS SHOWN	North	Stamp
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Drawing Status
PRELIMINARY FOR DISCUSSION

Drawn A.C./S.B. Checked G.D.H./M.H. Issue Date JUNE 2017

SECTIONS AND DETAILS

Drawing Title
16-01
Drawing Number
4 OF 5



REHABILITATION NOTES
GENERAL INFORMATION
 1. REFER TO SHEET 4 OF 4 FOR SECTIONS, SHEETS 2 & 3 OF 4 FOR OPERATIONS AND PHASING (DIMENSIONS AND NOTES AND SHEET 5 OF 5 FOR FINAL REHABILITATION AND NOTES)
 2. PROPERTY SHALL BE REHABILITATED TO:
 MEADOW 29.9 HECTARES
 TALLSLOPE 4.2 HECTARES
 FOREST 19.9 HECTARES
 EXPOSED BEDROCK 19.9 HECTARES
 TOTAL 73.9 HECTARES
 IF COMMUNICATIONS TOWERS BE REMOVED PROPERTY SHALL BE REHABILITATED TO:
 MEADOW 31.18 HECTARES
 TALLSLOPE 4.8 HECTARES
 FOREST 19.9 HECTARES
 EXPOSED BEDROCK 19.9 HECTARES
 TOTAL 75.86 HECTARES

HYDROGEOLOGICAL INFORMATION
 3. IT IS ANTICIPATED THAT THE GROUNDWATER ELEVATION ACROSS THE SITE WILL REMAIN RELATIVELY UNCHANGED AT 2014 - 2016 (SEE HYDROGEOLOGICAL REPORT)
 4. ALL SURFACE DRAINAGE WILL BE DIRECTED TO THE REHABILITATED WETLAND ON THE PIT FLOOR AND THE EXISTING UNDISTURBED WETLAND.
SLOPE/MEADOW REHABILITATION INFORMATION
SEEDING INFORMATION
 5. REHABILITATION OF SLOPES SHALL BE BY BACKFILLING AND/OR CUT AND FILL METHOD USING AVAILABLE ON-SITE OVERBURDEN, NEXT BEST QUALITY FILL SUBJECT TO NRMPP APPROVAL. WASTE ROCK, SUBSOIL AND TOPSOIL FROM WITHIN THE LICENSED AREA. SLOPES SHALL BE A MINIMUM GRADE OF 2% (SLOPES REPLACED WILL BE APPROXIMATELY 10% THICK). PORTIONS OF THE SITE WILL BE REHABILITATED TO TALLSLOPE (MAX 2:1 SLOPE, SEE DRAWINGS).
 6. THE REHABILITATION STRIPES THAT RUN NORTH-SOUTHWEST OF THE WETLAND SHALL BE REDIRECTED VIA A CONSTRUCTED SWALE.
TOPSOIL INFORMATION
 7. ALL AVAILABLE TOPSOIL ON THE SITE WILL REMAIN TO BE USED FOR REHABILITATION OF THIS SITE. AVAILABLE TOPSOIL REPLACED WILL BE SPREAD AT VARIABLE DEPTHS.
VEGETATION INFORMATION
 8. TEMPORARY TOPSOIL PROTECTION BARRIERS SHALL BE SEEDING WITH A MIXTURE OF GRASSES AND LEGUMES THAT MAY INCLUDE THE FOLLOWING AT A RATE OF APPROXIMATELY 125 kg/ha:
 TALLSLOPE RED CLOVER WHITE CLOVER
 BUCKWHEAT WHITE CLOVER
 TALL FESCUE PERENNIAL RYE CREEPING BENT GRASS
 REHABILITATED AREAS WILL BE SEEDING WITH NATIVE MEADOW MIX INCLUDING LOW GROWING NATIVE GRASSES.
 9. REHABILITATED AREAS WILL BE SEEDING WITH NATIVE MEADOW MIX INCLUDING LOW GROWING NATIVE GRASSES.
 10. ALL VEGETATION PLANTED DURING THIS LICENSE WILL BE MAINTAINED IN A HEALTHY, VIGOROUS GROWING CONDITION.
REFORESTATION REHABILITATION INFORMATION
 11. ALL VEGETATION PLANTED DURING THIS LICENSE WILL BE MAINTAINED IN A HEALTHY, VIGOROUS GROWING CONDITION.
 TREES SHOULD BE PLANTED IN MIXED GROUPINGS TO MIMIC A NATURAL FOREST. SPECIES PLANTED CAN INCLUDE NATIVE SPECIES FOUND ON THE SITE SUCH AS:
 SUGAR MAPLE RED MAPLE EASTERN HEMLOCK WHITE BIRCH
 WHITE SPRUCE WHITE CEDAR BUR OAK LARGE TOOTH ASPEN
 WHITE PINE TREMULIC ASPEN
SETBACK REHABILITATION INFORMATION
 12. AFTER SLOPES ARE CREATED AND REQUIRED BARRIERS ARE REMOVED FROM SETBACKS THESE AREAS WILL BE IMMEDIATELY STABILIZED WITH A SUITABLE GRASSCOVER.
FINAL REHABILITATION INFORMATION
 13. UPON COMPLETION OF EXTRACTION, THE SCALE, SCALE HOUSE AND ALL SCRAP AND EQUIPMENT SHALL BE REMOVED FROM THE SITE. ALL INTERNAL ROAD ROADS SHALL BE REHABILITATED ONCE NO LONGER IN USE FOR EXTRACTION RELATED ACTIVITIES.

- LEGEND**
- 10m INFORMATION BOUNDARY
 - BOUNDARY OF AREA TO BE LICENSED
 - REGULATORY SETBACK LINE
 - LIMIT OF EXTRACTION
 - EXISTING VEGETATION
 - EXISTING 5m CONTOUR LINE
 - EXISTING 1m CONTOUR LINE
 - PROPOSED 5m CONTOUR LINE
 - PROPOSED 1m CONTOUR LINE
 - PROPOSED 5m CONTOUR LINE IF COMMUNICATIONS TOWER REMOVED
 - PROPOSED 1m CONTOUR LINE IF COMMUNICATIONS TOWER REMOVED
 - DIRECTION OF SURFACE WATER DRAINAGE
 - EXISTING BUILDING
 - EXISTING HYDRO POLE
 - PROPOSED MEADOW
 - PROPOSED EXPOSED BEDROCK
 - PROPOSED WET MEADOW

SITE PLAN OVERRIDE (VARIANCE)

THE FOLLOWING CONDITIONS ILLUSTRATED ON THESE PLANS VARY FROM THE TYPE OF THE PROVINCIAL STANDARDS MADE UNDER THE AGGREGATE RESOURCES ACT:

SETBACK ALONG SOUTH BOUNDARY IS REDUCED TO 5m AS PER AGREEMENT WITH ADJACENT LICENSEE. SETBACK ALONG EAST BOUNDARY IS REDUCED TO 5m LICENSEE OWING ADJACENT LAND.	0.1/1

Pre Licence Review Site Plan Amendments

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 LOT 21, CONCESSION 5, (FORMERLY GALWAY-CAVENDISH & HARVEY TOWNSHIP) MUNICIPALITY OF TRENT LAKES, COUNTY OF PETERBOROUGH

Scale 1:2000	North	Stamp
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Drawing Title REHABILITATION PLAN	Project Number 16-01	Drawing Number 5 OF 5

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