



Elginburg Quarry Expansion

PLANNING RATIONALE and ZONING
JUSTIFICATION

PROPOSED OFFICIAL PLAN AMENDMENT
AND ZONING BY-LAW AMENDMENT



Prepared for Cruickshank Properties Corp.
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1 INTRODUCTION AND PROPOSAL

Cruickshank Properties Corp. (Cruickshank) owns the Elginburg Quarry site located in Part of Lots 14 and 15, Concession 5 of the geographic Township of Kingston, now part of the City of Kingston. The Quarry is operated by Cruickshank Construction Limited (also Cruickshank). The quarry is zoned to permit the existing uses at the site. The quarry is approved under the Aggregate Resources Act (ARA) with a Class A License and Site ID 2901. The licensed area is 56.8 hectares. It has a frontage of approximately 500 m on Unity Road and is approximately 1.1 kilometres west of Sydenham Road.

The proposal, with accompanying applications and reports, is to obtain approval for expansion of the existing quarry into Part of Lots 12 and 13 of Concession 5. City approvals are required under the Planning Act for an Official Plan Amendment (OPA) and Zoning By-law Amendment (ZBA).

Cruickshank is also making application to the Ministry of Natural Resources and Forests in accordance with the Aggregate Resources of Ontario: Provincial Standards, Version 1.0, Category 2 – Class 'A' Quarry Below Water. The application is to amend the existing quarry license. The expanded quarry will have a licensed area of approximately 136 hectares.

2 PURPOSE

This planning rationale and zoning justification is submitted in support of the applications for OPA and ZBA to enable expansion of the existing quarry into parts of Lots 12 and 13 of Concession 5 on the south side of Unity Road.

This report:

- Summarizes existing conditions,
- Considers studies' findings accompanying the request,
- Considers the proposed quarry expansion's compatibility with surrounding land uses,
- Examines the proposed quarry expansion with respect to consistency with existing policy such as the Provincial Policy Statement (PPS), City of Kingston Official Plan (OP), and Zoning By-law (ZBL) 76-26,
- Provides a planning opinion as to the merits of the applications, and
- Submits proposed changes to the OP and ZBL that would enable the proposed quarry expansion.

3 PRE-CONSULTATION AND STUDIES

3.1 Pre-consultation

Cruickshank pre-consulted with City staff on November 9, 2010 to determine requirements associated with the City's planning approvals. In brief, the existing OP policies and ZBL 76-26 provide the following policy direction and zone provisions for the site:

Official Plan

The site is designated Rural Area and Environmental Protection. A quarry is not a permitted use. A change to the appropriate Mineral Resource Area designation is required.

Zoning By-law

The subject lands are zoned General Agricultural Zone (A2). A quarry is not a permitted use and a zoning by-law amendment (ZBA) is required.

3.2 Studies

During and following the pre-consultation meeting the city determined that for an OPA and ZBA the following are required in support of the applications:

- A conceptual site plan,
- Site plan drawings (as per the ARA),
- Tree inventory and preservation study,
- Traffic impact study,
- Hydrogeology and hydrology study,
- Environmental impact study,
- Noise and/or vibration study,
- Archaeological report (stages 1 and 2),
- Operational plan,
- Landscape and buffering plan,
- Analysis of quantity and quality of aggregate,
- Copy of the permit and site plan for the existing quarry.

The city also indicated that upon review of submitted information additional studies or information may be required. The above required reports are considered below as part of this planning rationale.

4 THE SITE

4.1 Location

The site is located on the south side of Unity Road in parts of lots 12 and 13 of Concession 5 of the geographic Township of Kingston now being part of the City of Kingston, see Figure 1. The abutting lands (quarry) to the east has an approved entrance to Unity Road accommodating the traffic associated with the existing quarry, asphalt plant and concrete batching plant. The proposed expansion would continue to use the existing entrance.

The expansion site is irregular in shape. It has approximately 208 metres frontage on Unity Road, varies in depth from approximately 1,077 metres to 1,950 metres and has an overall area of approximately 144 hectares. A sketch of the site from existing survey information was provided by Higginson surveying and is shown as Figure 2. The areas shown in Figure 2 as

Planned License Expansion Area are the lands studied as to their suitability for quarry expansion.

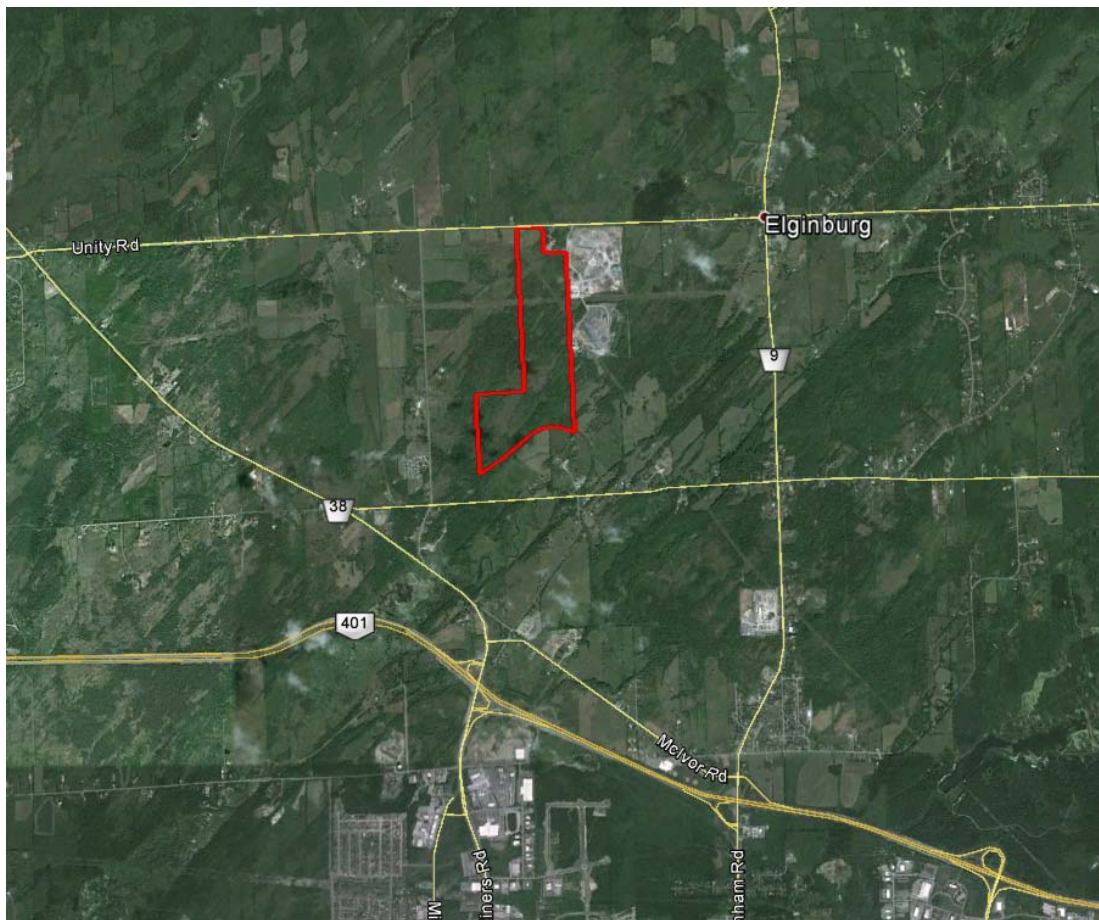


Figure 1 – Location (shown in red)

4.2 Site Condition and Use

The lands being considered are undeveloped. Portions of the site have been used for low intensity agricultural uses. The majority of the subject lands have been classified as Class 5 according to the Canada Land Inventory (CLI) Soil Capability mapping for agriculture. A hydro corridor and gas pipeline cross the property. The southern portion of the site has some lands with steeper slopes which are to remain in a natural state. The southern property limit for this application is the former K & P rail line which is now part of the K & P trail.

4.3 Existing Land Use

The quarry expansion lands are undeveloped (see Figure 3). Portions of the site have been used for pasture. The majority of the site has been left to re-vegetate.

Adjacent land uses within a 500 metre influence area may be characterized as follows:

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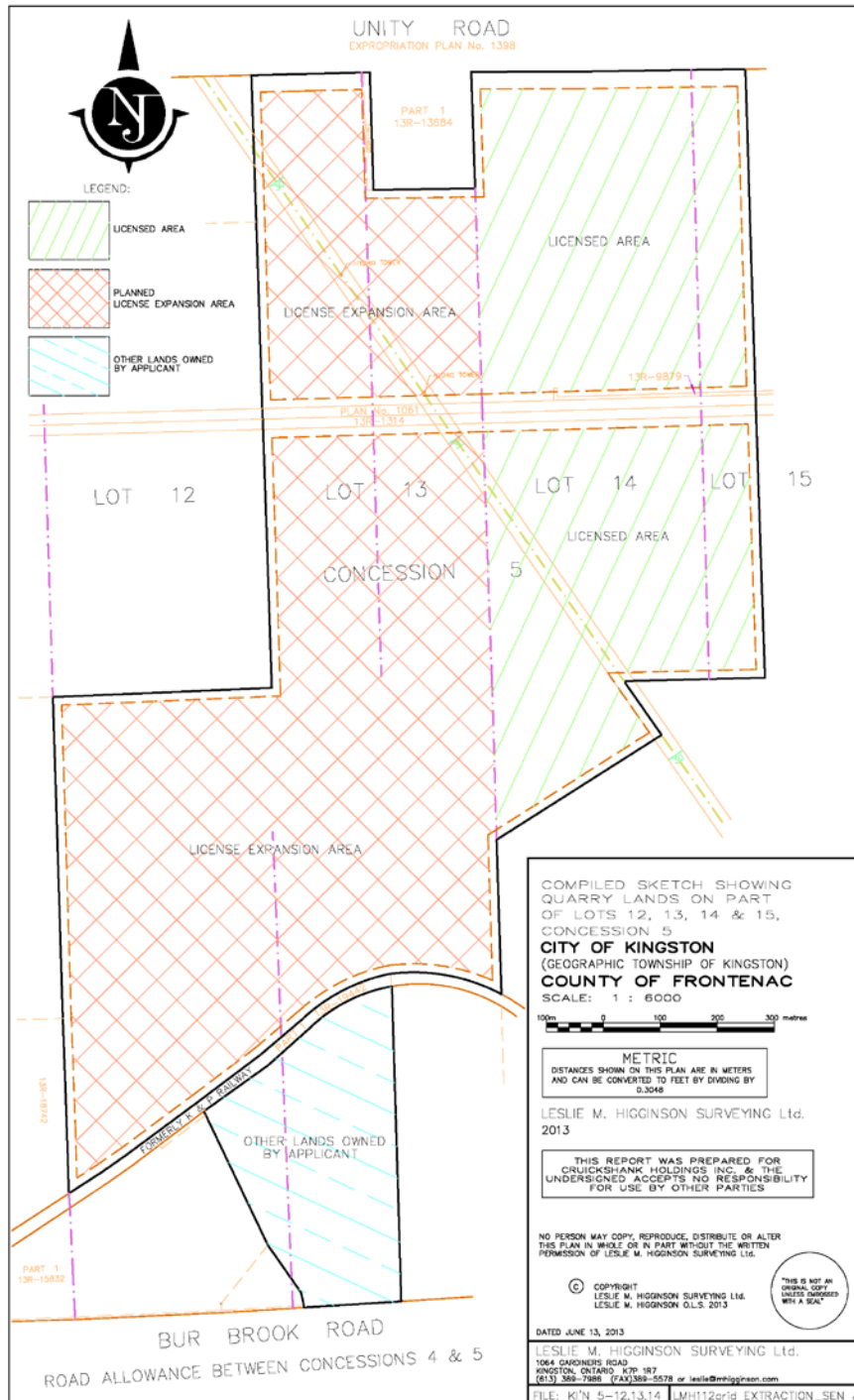


Figure 2 – Compiled Survey Sketch

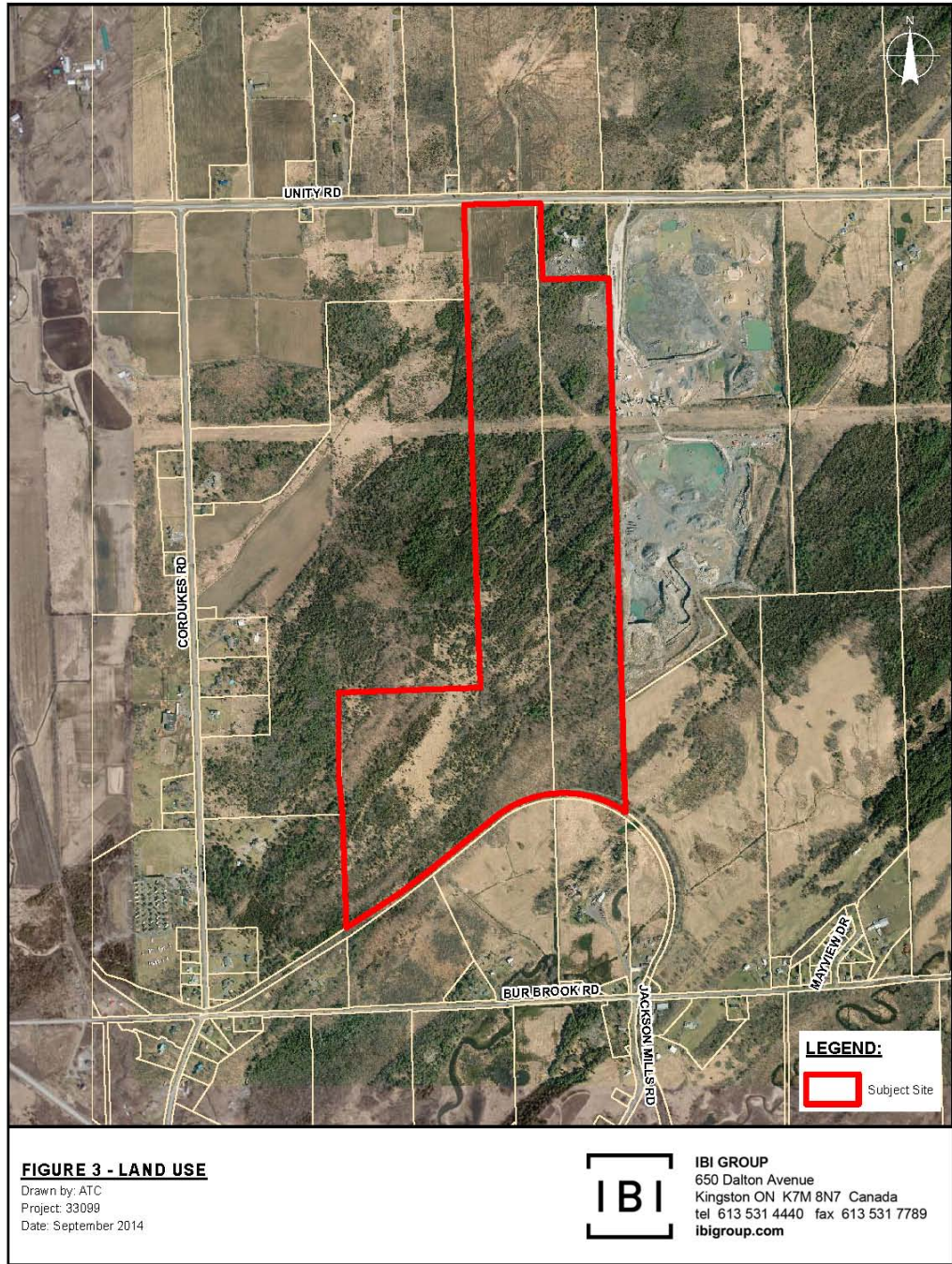


Figure 3 – Land Use

East: the existing quarry, asphalt plant, concrete batching plant and undeveloped lands. Farther east are agricultural lands and residences.

South: K & P trail, agricultural, and limited residential.

West: mix of undeveloped lands, rural residential and agricultural.

North: solar farm, limited rural residential.

At the north east corner of the proposed quarry expansion is a residence and what appears to be a contractor's yard. Overall, the quarry expansion is in an area of poor agricultural capability, adjacent a solar farm, and is generally separated from residential development. There are three residences along Unity Road less than 200 metres from the proposed quarry expansion. These, and other residences such as those along Cordukes Road, are considered below as part of the technical reports.

A pictorial representation of the site along Unity Road and adjacent uses is presented in Figures 4 to 9.



Figure 4 – Berm along Unity Road for Existing Quarry

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Figure 5 – Entrance to Existing Quarry and associated operations



Figure 6 – Abutting Residence and Contractor's Business at the north east corner of the site

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Figure 7 – Quarry expansion lands along Unity Road



Figure 8 – Residence and contracting business along north side of Unity Road



Figure 9 – Solar Plant along Unity Road

4.4 Future Use - Site Plans

Site plans were prepared by The Base Mapping Co. Ltd. of Ottawa. These were prepared in accordance with the Site Plan Standards as set out in The Provincial Standards. The site plans are submitted separately, they are prepared under the Aggregate Resources Act for a Class A licence, and comprise the following four pages (plans):

- Page 1 of 4, Existing Features/General
- Page 2 of 4, Existing Features/Site
- Page 3 of 4, Operation
- Page 4 of 4, Rehabilitation.

The Operation plan shows the setbacks to the property lines, and also shows a separation of 80 metres or greater from the K & P Trail.

4.5 Rehabilitation

Progressive rehabilitation is proposed as per the ARA and will commence as soon as quarrying operations permit. The sides will be rehabilitated by sloping the faces to a maximum slope of 2:1 down to 3 m below the expected water level with stored overburden, waste rock or other approved inert material.

Once operations are complete, and progressive rehabilitation has been performed and completed, the quarry will be allowed to fill with water and lakes will form, one on the north side and one on the south side of the pipeline. There is not anticipated to be overland flow from the lake south of the pipeline.

There will be no building or structures on site following final rehabilitation except for the electrical transmission towers and pipeline. Permanent access roads to the towers will be provided either as native rock or re-established after quarrying.

5 SUPPORTING REPORTS

The proposed quarry expansion was the subject of the following analyses.

5.1 Aggregate Resource Assessment

Morrison Hershfield (MH) prepared a report titled Aggregate Resource Assessment, Elginburg Quarry, Kingston, Ontario, dated October 2013. The report expanded on the preliminary assessment of aggregate resources of the expansion area as carried out by Golder in 2011. MH found most of the expansion lands are underlain by bedrock with very little overburden, with well record data suggesting that overburden depths vary from 0.6 to 1.8 m. MH indicated that Ministry of Environment (MOE) well database points to the presence of limestone to at least 43 m depth on the northern side of the property and at least 28 m depth on the western side of the property, and granite to at least 16 m depth on the south eastern side with limestone to at least 10 m depth on the south western side of the site.

The report identified two sources of concrete stone for use in structures, sidewalk, curb and gutter, and concrete base. Overall approximately 12 million tonnes of this resource were identified. Indications in the report are that none of the rock can reliably be considered concrete stone for use in pavements. The remainder of the rock can be used for Granular A (approximately 40 million tonnes). A program of rock quality testing was recommended.

5.2 Tree Inventory and Preservation Study

The city's pre-consultation notes indicated a tree inventory and preservation study would be required. On November 13, 2013 Cruickshank contacted the city about the requirement given the city's Tree By-law. Section 3 of the Tree By-law on Exemptions reads:

Trees may be injured or destroyed, without applying for a Tree Permit, where...the injury occurs on land described in a license for a pit or quarry or a permit for a wayside pit or wayside quarry issued under the Aggregate Resources Act.

The by-law goes on to say this applies where:

The injury or destruction is required in order to lawfully establish and operate or enlarge any pit or quarry on land: and...on which a pit or quarry is a permitted land use under a By-law passed under Section 34 of the Planning Act.

The matter is also dealt with under the ARA and so Cruickshank requested that the Tree Inventory and Tree Preservation Study be removed from the list of required submissions.

The November 14, 2013 e-mail from the Director of Planning to Eugene Conners (forestry) and Jason Budd (planning) stated that if the application is for a quarry expansion, then Cruickshank is exempt from the requirements of a Tree Permit and so there is no reason to require a tree inventory.

Based on the above exemption, a Tree Inventory Report is not required and so is not included.

5.3 Traffic Impact Study

A transportation report titled Elginburg Quarry (Unity Road) Traffic Review was completed by IBI Group in January of 2014. The report noted that:

- there are approximately 100 to 200 trips per day generated by the site with almost 300 trips per day in the busiest month of August. This could increase to 150 to 300 trips per day with 450 trips per day in the month of August, after the quarry expansion. This would represent 7% to 14% of the AADT on Unity Road, and

- there are no significant obstructions to sight lines for vehicles exiting the site.

The study concluded that:

- the speed of traffic on Unity Road should not create significant conflicts with anticipated site traffic, and
- the current layout of the entranceway features (slip-by lane, right turn lane) on Unity Road is consistent with a design speed of 70 to 80 km/hr but is less than the 100 km/h design speed anticipated for Unity Road.

5.4 Environmental Impact Study (EIS)

An environmental impact statement titled Natural Environment Technical Report: Level I and II Elginburg Quarry, dated October 7, 2014, was prepared by Ecological Services over the period of 2010 to 2014. The report addressed environmental matters based on the requirements of the Aggregate Resources Policy from the Manual for the Aggregate Resources Act and based on the requirements of the Provincial Policy Statement (PPS), and also considered the City's Official Plan.

The study addressed such matters as Significant Woodlands, Significant Wetlands, Significant Habitat of Endangered and Threatened Species, Significant Areas of Natural and Scientific Interest (ANSI), Significant Valley Lands, and Significant Wildlife Habitat.

The report acknowledged there may be butternut trees on adjacent lands to the west, and there is a woodland with some value in the adjacent lands to the south that may also contain snake hibernacula (see figure 10 of the EIS report for lands labelled 'woodlot'). This woodland to the south is along a ridge and is to be left in a natural state and so would not be impacted. The other woodland (FOD5-8) at the western portion of the site and labelled expansion area on Figure 10 to the EIS is not considered significant.

The report also examined the Environmental Protection designation on the site as shown on Schedule 3-B, the Riparian Habitat shown on Schedule 7-B, and the Unevaluated Wetland shown on Schedule 8-B to the OP. The EIS concluded that since the wetlands are not significant, there is not riparian habitat, nor significant wildlife habitat, and because the waterways regulation likely does not apply, the EIS authors are of the view that the EP designation on Schedule 3-B to the OP is not appropriate.

Based on the analysis over the four year period, the report concluded that:

Significant natural heritage features were not found on the proposed expansion lands.

5.5 Noise Study (Acoustical Assessment)

An Acoustic Assessment report, Elginburg Quarry Expansion, Dated September 17 of 2014 was prepared by Hugh Williamson Associates Inc. The assessment considered the impact on nearby noise sensitive land uses (residences) of noise generated by all on-site equipment operations, asphalt production, loading and vehicle movements. The acoustical analysis considered noise from both the existing and expansion areas.

Noise impacts were assessed for daytime and evening and night time operation based on worst cases among all scenarios. Based on the facility description, operations, description of noise sources, and location of critical receptors, all in accordance with MOE Noise Assessment Guidelines, specific and detailed noise mitigation measures are outlined for inclusion in the site plan (Operation plan) for the Elginburg Quarry under the ARA.

With the recommended noise mitigation measures, the noise impacts of operations at the Elginburg Quarry Expansion Area are predicted to meet the applicable MOE guideline limits for daytime operation, 07:00 to 19:00 and evening and night time operations, 19:00 to 07:00.

5.6 Blast Impact Analysis

A blasting report titled Blast Impact Analysis, Proposed Elginburg Quarry, City of Kingston, Province of Ontario was completed by DST Consulting Engineers Inc. in June of 2014.

The report notes there are two receptors within 120 m and another 5 residences within 500 m. The closest receptor is at 2467 Unity Road.

The report concluded that the quarry expansion

can be developed safely and productively in the proposed licenced area, while staying within the Ontario Ministry of the Environment and guidelines and regulations for blasting in mines and quarries as well as regulations of the Department of Fisheries and Oceans provided the quarry operator follows all recommendations in this report.

The report included a monitoring plan which, along with the recommendations, are intended to ensure the blasting operations are carried out in a safe and productive manner so that no possibility of damage exists to third party receptors. These will be implemented through the license under the ARA.

5.7 Archaeological Assessment

A stage 1, a stage 2, and three (3) stage 3 archaeological assessments were carried out.

Stage 1 Archaeological Assessment

The assessment, titled Stage 1 Archaeological Assessment, Part of Lots 12 & 13, Concession 5, Kingston Township, Frontenac County, City of Kingston was carried out by Ground Truth Archaeology and Abacus Archaeological Services and completed in October of 2010. The study concluded the area has areas of high potential for significant archaeological resources especially along the southern edge where there is a ridge running along Bur Creek and recommended a Stage 2 assessment. The report also included the following recommendations:

- If following the Stage 2 investigations any undetected or deeply buried archaeological remains are discovered during the course of future development the landowner should contact the Ontario Ministry of Culture, Archaeology Section, and
- If following Stage 2 investigations any human remains should be discovered during the course of future development the landowner, or their agents, should contact the Police, the Cemeteries Registrar or the Ministry of Consumer and Commercial Relations and the Ontario Ministry of Culture.

Stage 2 Archaeological Assessment

The assessment, titled Stage 2 Archaeological Assessment of the Elginburg Quarry Expansion, Frontenac County, Ontario was carried out by Ground Truth Archaeology and completed in February of 2014. Four archaeological sites were identified, all along the southern edge of the property. These consisted of a lime kiln (BbGd-59), a foundation (BbGd-60), a small Native site (BbGd-61) and a non-domestic activity area (BbGd-62). The assessment recommended:

- The small Native site (BbGd-61) was determined to be an isolated findspot and would not require further archaeological investigation,

- Archaeological sites (BbGd-59, BbGd-60, and BbGd-62) have cultural heritage value and require a Stage 3 archaeological assessment to determine their limits and further understand their nature, and
- The remainder of the property was found to have no archaeological resources and is considered to have been cleared of all archaeological concerns.

Stage 3 Archaeological Assessments

BbGd-59

The lime kiln site was found near the top of a slope directly south of the quarry expansion. The lime kiln is relatively well constructed and well preserved.

BbGd-60

The large stone foundation lies almost directly 100m downhill of the well preserved lime kiln (BbGd-59). The foundation, when taken in conjunction with the kiln and the railway, represents a light industrial use of the landscape of rural Ontario not often encountered in the archaeological record.

BbGd-62

This is believed to be a small lime kiln. It is the most south westerrly of the three sites. As the lime kiln is a relatively rare example of light industrial activity in nineteenth century rural Ontario it was considered to have cultural heritage value and should be preserved.

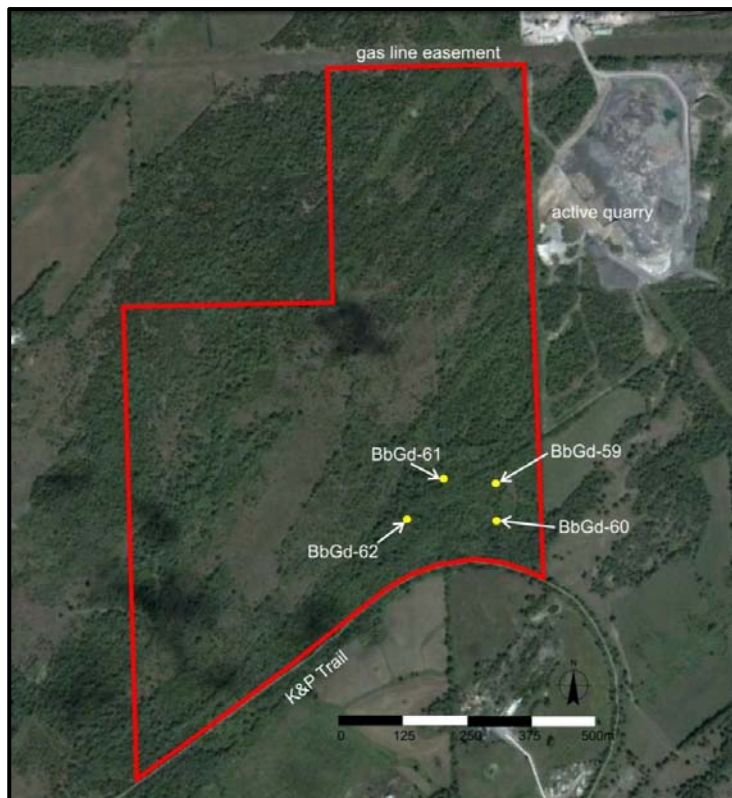


Figure 10 – Archaeological Sites

The stage 3 assessments each contained the following recommendations regarding the protection of the sites:

- The sites should be considered to have cultural heritage value and are recommended for Stage 4 mitigation.
- Avoidance and protection of the sites is the preferred option for mitigation.
- If avoidance and protection is not possible then the sites or portions thereof will require Stage 4 excavation.
- If avoidance and protection is chosen, a long term protection strategy is to be put in place. Two general approaches are to either protect the sites and the 10m buffers alone or put in place a broader protected area within which the sites and the 10m buffers are contained. In the 'site only' approach an accurate delineation of the sites and the 10m buffers is to be shown on as a part or parts on a separate plan with associated proscriptive zoning and a restrictive covenant placed on title. Conversely the site and two associated sites and their buffer zones could be protected by one larger protected area that encompasses them all.
- Additional recommendations related to construction, delineation of the areas on all contract drawing, construction fencing around the buffer zone, and inspection requirements by a licensed archaeologist if construction occurs in close proximity to the buffer zones.

5.8 Hydrogeology and Hydrology

The potential hydrogeology and hydrology impacts of the quarry expansion were considered in a September of 2014 report prepared by MH titled Hydrogeological Impact Assessment for the Expansion of the Cruickshank Elginburg Quarry.

Hydrogeology

The results of the background data review and field data indicated that the limestone bedrock is of very low permeability, except within a few hundred metres of the south-facing escarpment and the south end of the quarry expansion. At that location, weathering and/or a different stress regime has resulted in enhanced permeability and a depressed water table.

Quarrying and dewatering of the quarry sump will lower the water table at the quarry itself. The lowering of the water table is not expected to propagate more than 50 m from the quarry walls on the north side, and will not propagate more than 100 m from the quarry walls on the west side of the expansion. The highest risk receptors are the two wells closest to the expansion lands at 2528 Unity Road and 2467 Unity Road (the north portion of the quarry expansion). The report concludes that the very low permeability of the limestone bedrock in this area will limit the propagation of drawdown from the dewatered quarry, and the well should continue to be recharged locally by precipitation.

Following rehabilitation, lakes are expected to form in the quarries on the north and south side of the pipeline traversing the site. The north lake is expected to flow into the south lake and the south lake is expected to equilibrate at approximately the elevation of the current water table at the south side of the property.

The report makes recommendations with respect to groundwater level monitoring and recommends a contingency plan to address the unlikely event of water well interference complaint or if monitoring data suggests a potential impact to a receptor.

Hydrology

Surface waters were considered in light of the existing and expanded quarry. The surface water quality results indicate much lower concentrations of general and inorganic parameter than in the groundwater. Only aluminum and boron and zinc were present in concentrations marginally above PWQO. As part of the storm water management:

- A berm will be constructed in the 30 m offset at Unity Road to prevent southerly flow of water into the quarry from the municipal ditch and taking the waters to the tributary of Collins Creek to the point it currently arrives at, via a different route.
- Storm water from the northern portion of the quarry will continue to be directed to a sump in the south east corner of the existing quarry where it will be pumped as per current practice.
- Storm water from the southern quarry will continue to be discharged via pumping.
- An option of a large self-draining sump in the southwest corner of the existing quarry is also under consideration. This would act as a place for sedimentation before discharging to the surface water feature at the toe of the escarpment.
- Environmental Compliance Approval (ECA) will be required for the treatment and disposal of industrial process water from the quarry. Conditions of the ECA are expected to include monitoring.

6 OPINION

Opinions herein are based solely on the information available at the time of writing this report and matters considered within this report. If new information or additional parameters are required to be taken into consideration, we reserve the right to reassess our opinion based on the additional information and/or parameters.

7 PLANNING POLICY ANALYSIS

The proposal is considered in light of the Provincial Policy Statement of April 2014, Official Plan for the City of Kingston, and Zoning By-law 76-26.

7.1 Provincial Policy Statement (PPS)

The PPS provides policy direction on matters of Provincial interest. Section 2 of the Planning Act requires Council “be consistent” with the PPS in carrying out its responsibilities under the Planning Act. Generally, the PPS requires Council ensure there is an efficient pattern of land use, there is a co-ordinated comprehensive approach in arriving at land use decision, that development contributes to the long-term economic prosperity of the Municipality, that development protects natural heritage features, that infrastructure and public services be provided in a co-ordinated, efficient and cost effective manner.

With respect to Mineral Aggregates, the PPS directs that they are to be protected for long-term use and where provincial information is available deposits are to be identified (2.5.1). As much of the mineral aggregate resource as is realistically possible shall be made available, as close to markets as possible (2.5.2.1). The 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 (2.5.2.1). Extraction is to be undertaken in a manner that minimizes social, economic and environmental impacts (2.5.2.2). Progressive rehabilitation is also required to accommodate subsequent land uses, promote compatibility, recognize the interim nature of the extraction, and mitigate negative impacts to the extent possible.

The application to expand the existing quarry:

- Is in an area of limestone deposit where there is supply of material for aggregate and asphalt. Subject to further testing the deposit may also be suitable for concrete production,
- Is close to market as intended by the PPS,
- Is along a major road (Unity Road) which is classified as an arterial in the City's Official Plan. The road can support the additional traffic,
- No municipal services are required and no uneconomic extension of municipal infrastructure is needed,
- Significant natural heritage features are protected,
- Significant archeological features are protected,
- There is no significant impact with respect to hydrogeology or hydrology,
- There is no significant impact with respect to noise, traffic, hours of operation,
- Progressive and ultimate rehabilitation is proposed as per the Rehabilitation plan submitted as part of the application under the Aggregate Resources Act,
- Approvals are also required for a license under the Aggregate Resources Act. An application for licence under the ARA is being submitted concurrently with the planning applications to the city.

In our opinion, the applications for Official Plan Amendment and Zoning By-law amendment to permit the expansion of the existing quarry are consistent with the intent of the PPS.

7.2 Official Plan (OP)

The Planning issue is whether the proposed Official Plan Amendment (OPA), and implementing zoning by-law amendment, represent good planning, are in the public interest, and whether the change is consistent with the intent of the OP.

The OP places the site within the Country Area category in Schedule B. The site is designated as Rural Area and a small area is designated Environmental Protection on Schedule 3-B to the OP (See figure 11). Schedule 7-B to the OP shows riparian habitat on the site. Schedule 8-B to the OP shows significant woodland and an unevaluated wetland on the site. The site is in an area of moderate to high sensitivity on OP Schedule 11 and is shown as being on a limestone plain in Schedule 12.

The Country Area policies recognize that there are significant features of import to the City in rural areas (2.2.17). The OP recognizes that there are lands having aggregate potential that would be preserved for future use as well as sites currently engaged in aggregate extraction. The OP also recognizes that Country areas may accommodate uses that require extensive land areas including industrial uses not suited to industrial parks where planning for these uses requires the identification, among other things, of mineral resources that may be present (2.3.11).

In making land use decisions in Country areas the city recognizes that sites can have significance to more than one function. Where there is a conflict the city will be strongly guided by (2.2.18):

- The priorities expressed in the PPS and other provincial legislation,
- The planning principles expressed in section 2 of the OP, and
- The particular circumstances of the site in the context of existing development and policies of the OP.

The application is consistent with the intent of the PPS (see above), is a type of use anticipated in the Country Area as demonstrated by the mineral resource areas designations on Schedules 3-B and 3-C of the OP and, based on the technical analyses submitted with the applications, the expansion to the existing quarry is compatible with the uses in the area. In our view, the proposal is consistent with the strategic direction expressed in the OP.

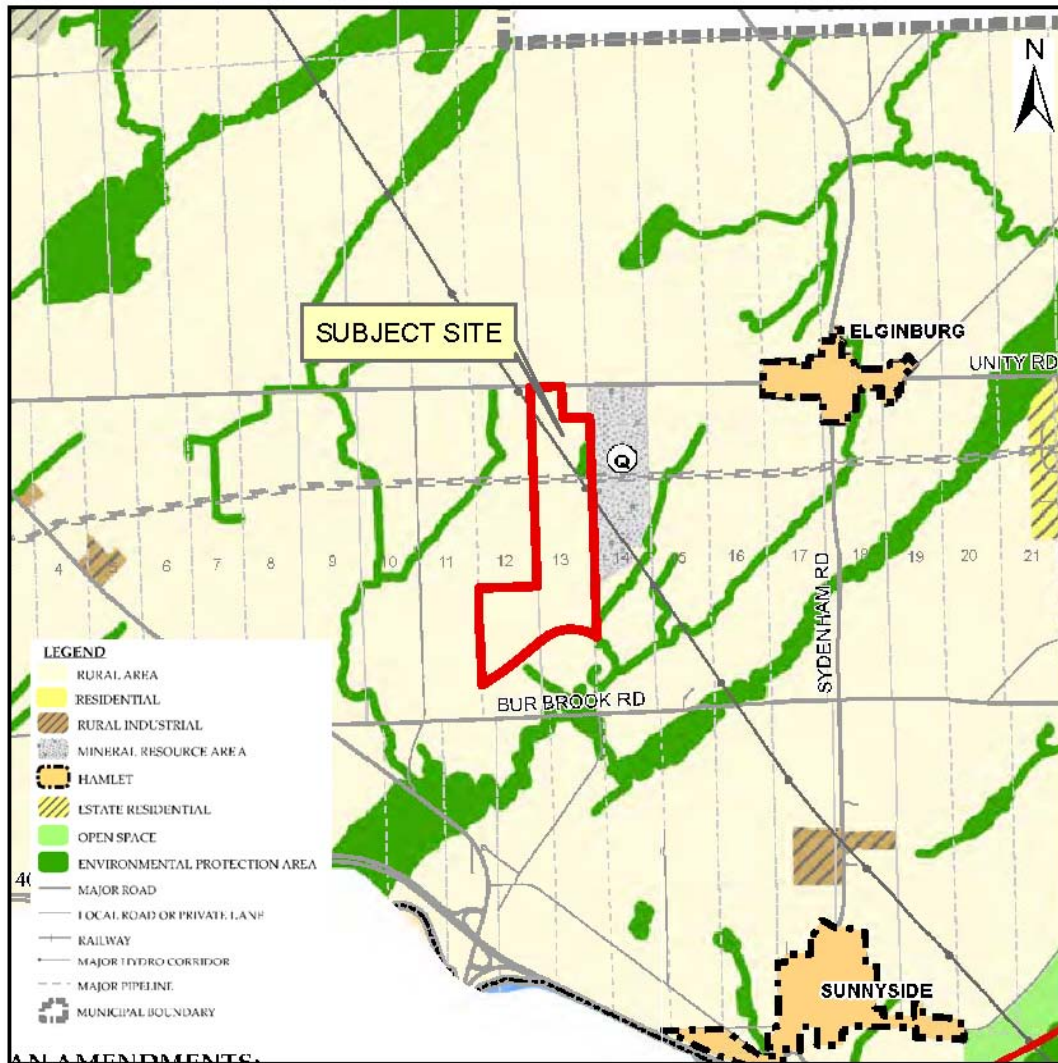


Figure 11 – Official Plan Designation (Schedule 3-B)

The site as designated on Schedule 3-B does not permit quarry expansion. The request is to re-designate the site to Mineral Resource Area – Aggregates to permit the quarry expansion.

The designations on Schedule 3-B builds on and reflect Schedules 7-B and 8-B. The EIS, with respect to Schedules 7-B and 8-B, found that the wetlands are not significant, there is not riparian habitat, nor significant wildlife habitat, and since the waterways regulation likely does not apply, the resulting Environmental Protection (EP) designation on Schedule 3-B is not

appropriate. Hence a re-designation of the Environmental Protection lands would not offend the OP with respect to environmental features.

With respect to significant woodlands on Schedule 8-B, the EIS found them to not be significant. However, the FOD5-8 wooded area at the sloped area near the K & P Trail (see Figures 5 and 10 of the EIS) was found to have some value in the form of slope protection, older age, and having fewer non-native species. Although not deemed significant, the quarry expansion plans have been modified to avoid development of that portion of the site as per the EIS recommendation, thereby protecting, by leaving the identified southern FOD5-8 site in a natural state. Based on the EIS, a change to a Mineral Resource Area – Aggregates designation to allow the proposed development of the balance of the site for an expanded quarry and associated uses was seen as appropriate from an environmental perspective.

Land uses permitted within lands designated Mineral Resource Areas-Aggregates includes quarries and associated operations such as crushing, blending, screening, washing, aggregate stock-piling, aggregate recycling, asphalt manufacture, concrete batching (3.17.B.1). Section 3.17 on Mineral Resource Areas appears to recognize only mineral aggregate resources on Schedule 3-B that are licensed for extraction. Hence only existing uses are recognized. Areas with potential resources for extraction where a quarry use is to be established or expanded require an OPA and Zoning approvals. In examining a request for change, the OP indicates the city will consider (3.17.9):

- a) Location and impact on adjoining communities: the site is along an arterial and would expand an existing quarry. The site is approximately 1 km for the nearest community of Elginburg. The quarry expansion is in a direction away from Elginburg (exiting community). Based on the supporting studies, there is not significant adverse impact.
- b) Size and scale and nature of use: The use is the same as the existing quarry. The existing quarry is licensed for 500,000 tonnes per annum. The request is to increase the licence to 1,000,000 tonnes per annum. It does not mean the quarry will operate at that level based on past experience, and based on market demand on any given year, but allows for short term opportunities depending on the nature of major road contracts that sometimes arise.
- c) Compatibility with adjacent and proposed uses: there are few residences within 120 m and within the 500 m influence area. Based on the hydrogeology, traffic, acoustic assessment, blast impact analysis, and monitoring and remediation recommendations, there is no significant adverse impact and the quarry expansion is compatible with adjoining uses.
- d) Accessibility and traffic impact: The site is located on an arterial. The arterial is currently being accessed by the existing quarry. The expansion will continue to use the existing entrance. The traffic impact study indicated the road system can support the quarry expansion with no significant adverse impact.
- e) Landscaping and buffering to minimize adverse effects: the operations plan shows an earthen berm of varying heights to screen the operation from adjoining uses. The berm will be allowed to re-vegetate as per the existing berm. Buffering also includes a variety of noise barriers based on the location of activities within the quarry.
- f) An environmental Impact Assessment is submitted: the EIS is submitted and no significant impacts were indicated.
- g) Archaeological Assessment is submitted if necessary: the archaeological assessments were necessary and are submitted. Recommendations to protect identified resources were included as part of the Stage 3 reports and will be implemented through the operation plan and zoning amendment.

- h) Hydrology and Hydrogeology: the report on the hydrogeology and hydrology is submitted. It discussed the natural drainage, the groundwater and surface waters. No significant adverse impacts are expected. A monitoring program was also recommended.

Policy 3.17.7 requires progressive rehabilitation. A rehabilitation plan is submitted in accordance with the Aggregate Resources Act.

The city indicated that the following policies are also to be considered:

- 2.7.3 Adverse Effects. Most of the policies are oriented to urban developments. Applicable policies were considered and:
 - Noise, odour, dust and vibration. Based on the reports, there is no significant adverse effect. There will also be one or more ECAs required under the EPA act.
 - Traffic. A traffic impact study was submitted and no significant adverse effect was found.
 - Environmental damage. The EIS indicated there are no significant adverse effects to the natural environment.
 - Diminished service levels. No diminution in existing service levels is anticipated. There is not any request to change existing service levels.
 - Reduction in ability to enjoy property. The technical analyses show no significant adverse effects with respect to noise, blasting, hydrogeology, hydrology, or environmental impact. Hours of operation are as now for the existing quarry. The operations plan also shows proposed berms and screens the expansion from adjacent uses. Access is by way of the existing entrance to an arterial, as per the existing quarry, that can carry the additional volume. No reduction in the ability to enjoy property is anticipated.
 - Loss or impairment of significant views, cultural heritage resources and natural features. Heritage archaeological features are identified and are proposed to be left as is along with protected buffer areas. No other significant features were found and so none are lost.
- 2.7.5 Minimum Distance Separation does not apply.
- 2.7.6 Mitigation measures have been established, as well as monitoring considerations, through the studies submitted and to be implemented as part of licensing under the ARA.
- 2.8.2 Minimum Forest Coverage is retained: Given the nature of the use, there will be loss of forest coverage. The loss is not, based on the EIS, significant woodland as per the PPS. The one wooded area on the slope which was deemed to have environmental value and benefits is outside the area to be quarried and is therefore protected.

Based on our review of the OP policies and designations, it is our view that the request for re-designation of the subject site to Mineral Resource Areas – Aggregate to permit the expansion of the existing quarry meets the policy tests of the OP and therefore represents good planning.

7.3 City of Kingston Zoning By-Law 76-26

The site is zoned General Agricultural Zone (A2). A variety of uses are permitted consistent with those found in most municipal by-laws for rural areas. This includes such uses as a residential dwelling, a cemetery, a church, a farm, a kennel, a crematorium, a livestock sales barn, and a riding stable as examples.

The quarry expansion site is surrounded by the A2, M5-1, and A2-8 zones (see Figure 12). The A1 (Restricted Agricultural Zone) east of the existing quarry is similar to the A2 zone in terms of uses permitted. The A2-8-H zone allows the uses in the A2 zone but requires several studies before the lands are allowed to develop further. The M5-1 zone applies to the existing quarry and is a zoning consistent with the zoning required for the proposed quarry expansion.

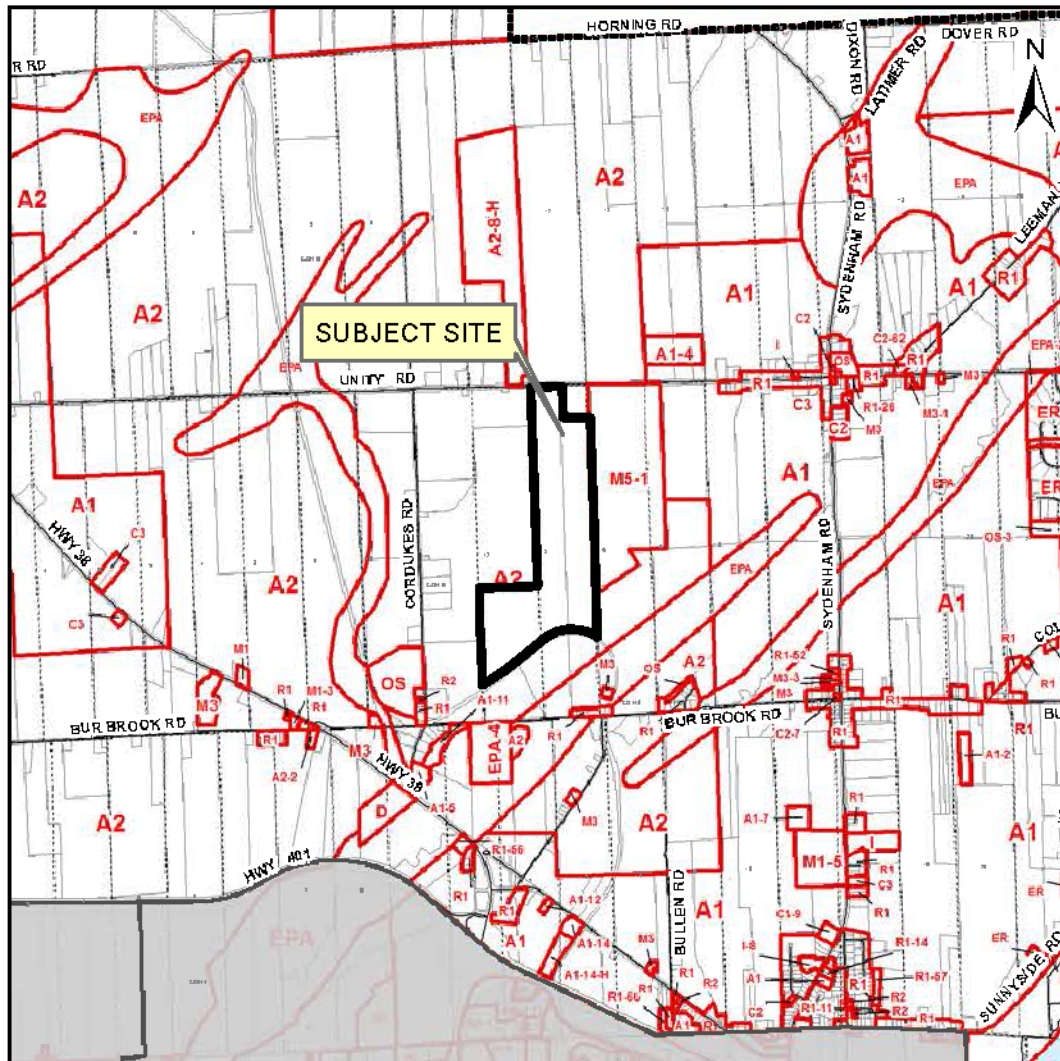


Figure 12 – Existing Zoning (By-law 76-26)

In considering applications for zoning amendment, the OP indicates the city will consider the following (3.17.3):

- a) Location of the proposed site and impact on adjacent communities. The application is for the expansion of an existing use. Location relative to existing communities is unchanged. The nearest community is approximately 1 km away and based on the supporting studies no significant adverse impacts are anticipated.

- b) Compatibility of the use to uses within 500 m. Based on existing land use, surrounding designations and zones, and reports submitted in support of the applications, the expansion is compatible with existing and planned uses.
- c) Ministry advice on resource potential. The PPS (2014) states this is not a matter to be considered. Nevertheless, a study was submitted demonstrating there is substantial aggregate deposit of suitable quality.
- d) The size, scale and nature of proposed use. The use will be similar to the existing quarry. The licensing will specify a maximum tonnage of 1,000,000 tonnes per annum.
- e) Accessibility and entrances are as now. The entrance exists. Based on the traffic study minor improvements are indicated for the entrance. Road pattern remains unchanged from the existing quarry and is dependent on location of demand for aggregate products. The existing arterial was found to be able to absorb the additional traffic.
- f) Haulage routes and community impact. Access, as now, is to an arterial (unity Road). From that point the majority of travel will be along arterials such as Perth Road, Sydenham Road, City road 38, to the project sites whether in urban or rural areas and to Highway 401. No significant change and therefore adverse impact to existing communities is anticipated.
- g) Submission of materials required by the city:
 - A site development survey and uses within 500 m. This is submitted as part of the applications.
 - Hydrogeology analysis. This is submitted as part of the applications.
 - Hydrology and Environmental Impact study. These are both submitted as part of the applications.
 - Operational Plan. This is submitted as part of the applications.
 - Description of operation. This information is contained within the various reports submitted as part of this application and is described in the plans submitted for licensing under the ARA.
 - Landscaping, screening, buffering. This is part of the operational plan submitted as part of the applications.

The portion of the site to be used for quarry expansion is to be placed within the M5-X zone. The uses to be permitted are those of the M5-1 zone. These are:

- a stone quarry,
- a public use as per section 5(18) of by-law 76-26,
- aggregate screening,
- an asphalt plant,
- a crushing plant, and
- any combination of the above.

Yard provisions are to be as per the existing provision for the M5-1 zone and Operations plan. These are to be:

Required yards (minima)

Front Yard Abutting Unity Road:	30 metres
Interior Side yard:	15 metres

Where this abuts the M5-1 zone: 0 metres

Rear Yard (at the newly created OS-X zone, see below, abutting the K & P Trail): 15 metres

The OS-X zone is established to protect the three archaeological sites that were the subject of the Stage 3 archaeological reports and the wooded area along the slope identified as FOD5-8 in the EIS. The three archaeological sites are described on Plan of Survey 13R-20982 as follows:

SITE	PART NO.	BUFFER AREA (10m Radius) PART NO.
BbGd-59	3	4
BbGd-60	5	6
BbGd-62	1	2

The archaeologist also indicated there should be no soil disturbance within the buffer (protected) area.

Uses permitted are those of the OS zone but restricted to a park, a conservation use, a forestry use, and a public use in accordance with the provisions of Section 5(18) of by-law 76-26. As per the stage 3 archaeological reports, the by-law will contain a provision regarding the non-disturbance of soil within the buffer area.

The request for rezoning implements the requested OPA and complies with the policy regime for evaluating a rezoning to permit a quarry expansion. Specific provisions proposed as part of the by-law are consistent with provisions for quarries in by-law 76-26 and setbacks established for licensing under the ARA.

Existing M5-1 Zone

The M5-1 zone, on its western boundary, abuts the proposed quarry expansion and, based on the Operations and Rehabilitation plans will be operated and rehabilitated as one quarry. Hence the existing zoning for the existing quarry is to be amended by revising the western (abutting the quarry expansion) side yard as “0” metres.

8 CONCLUSIONS, OPINION AND RECOMMENDATION

The application to amend the OP and ZBL to permit the expansion of the existing quarry operated by Cruickshank Construction Limited and permit uses associated with a quarry such as extraction, crushing, blending, screening, washing, aggregate stock-piling, aggregate recycling, asphalt manufacture, concrete batching were considered in light of the site, existing uses, technical reports and the policy environment.

Based on the technical information, particularly the EIS and Archaeological reports, and the Operation plan was revised (see Figure 13) to exclude those areas from the portion of the site to be licensed.

The zoning implements figure 13 and will place lands outside the licensed area in an open space category. This is a large protected area as indicated as a mitigation measures by the archaeological report. Uses permitted in the Open Space zone will be limited and activities such as disturbance of soil within 10 metres of the archaeological sites, prohibited.

Based on the above considerations, the proposed quarry expansion:

- Does not create significant off-site adverse impacts as reflected in the supporting technical reports,
- Does not create significant adverse environmental impacts,
- Protects wooded area along the slope as identified in the EIS,
- protects archaeological resources,
- Is along an arterial and the roadway system can absorb the increased traffic,
- No uneconomic extension of infrastructure is required,
- The use is compatible with existing uses and planned land uses for the area,
- Is consistent with the PPS,
- Is consistent with the policy tests in the OP for re-designation the site to Mineral Resource Area – Aggregates.
- Is separated from the K & P Trail by 80 metres or more and the intervening lands will be in an Open Space (-X) zone,
- The proposed zoning attached as Appendix B implements the proposed OPA and findings of the technical reports such as the EIS and Archaeological reports.



Prot Figure 13 – Subject Lands & Land outside area to be licensed

ELGINBURG QUARRY EXPANSION
Prepared for Cruickshank Properties Corp.

Based on our review it is our opinion that the proposed quarry expansion is appropriate, represents good planning, and is in the public interest.

We recommend that Council adopt the requisite Official Plan Amendment and implementing Zoning By-law amendment to allow the requested expansion of the existing quarry.

Report Prepared By:

John Uliana M.C.I.P., R.P.P
Associate

APPENDIX A

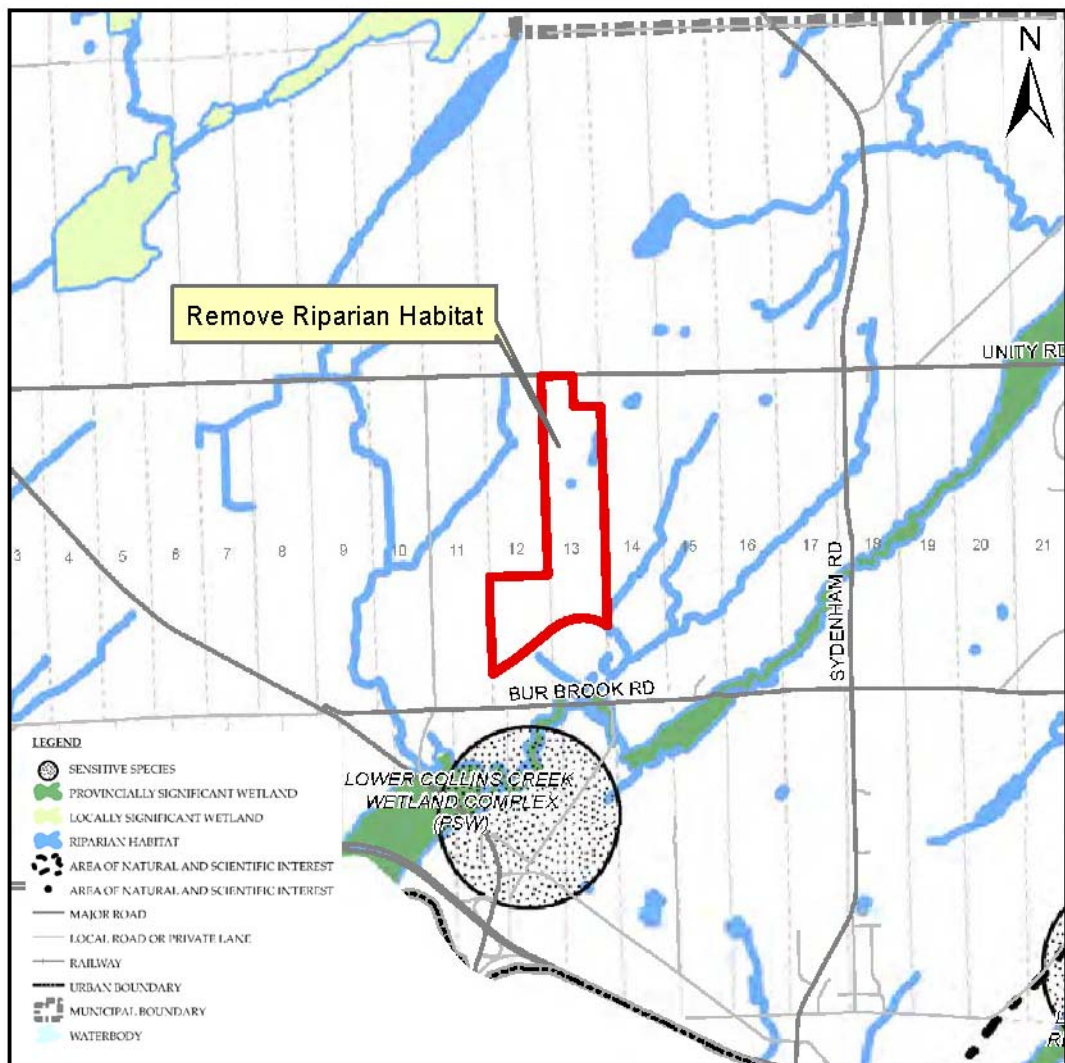
PROPOSED OFFICIAL PLAN AMENDMENT TEXT AND SCHEDULES

OFFICIAL PLAN AMENDMENT TO SCHEDULES 7-B, 8-B and 3-B

OFFICIAL PLAN AMENDMENT NO. _____ TO SCHEDULE 7-B NATURAL HERITAGE AREA 'A'

That Schedule 7-B, Natural Heritage Area 'A', to the City of Kingston Official Plan is amended by removing the Riparian Habitat designations of lands shown as "Remove Riparian Habitat" on Schedule A attached hereto and being part of this amendment.

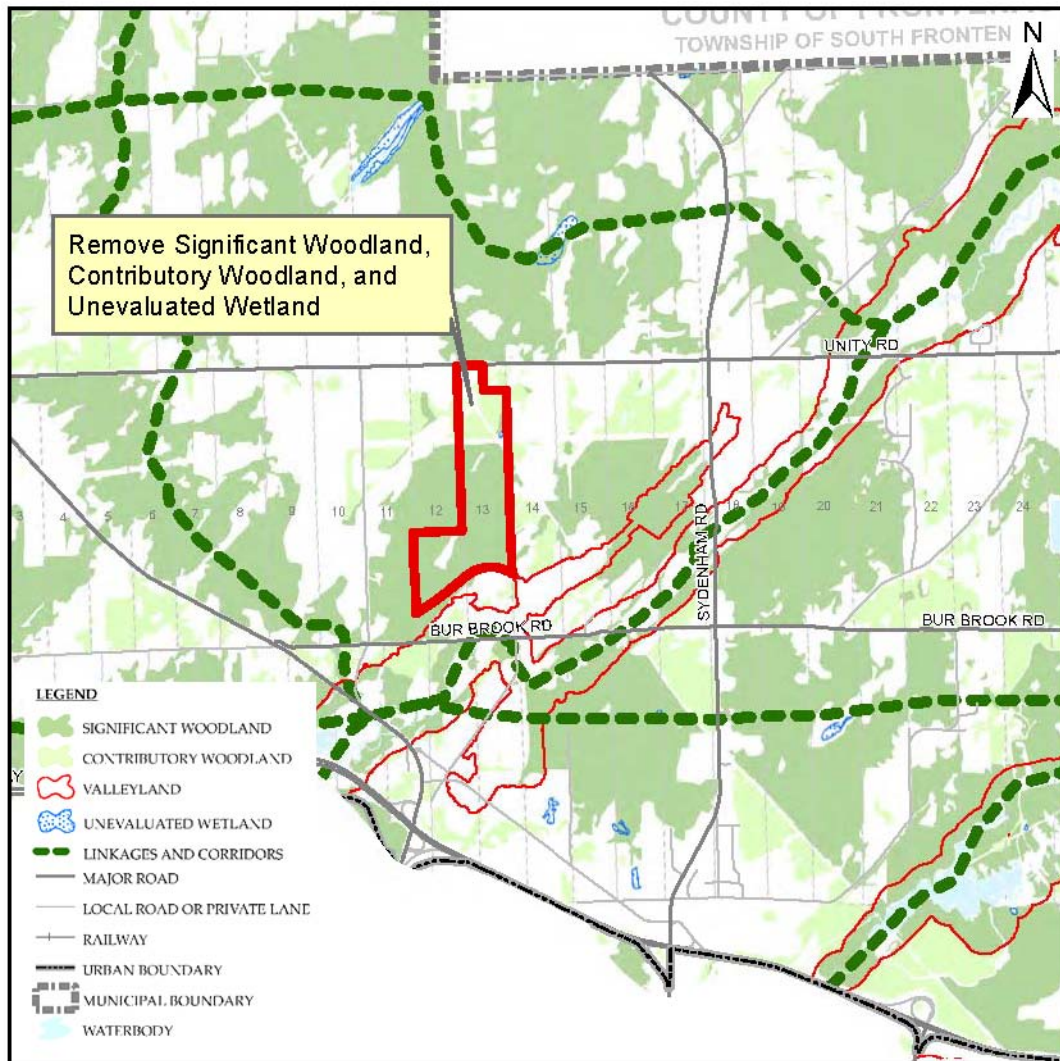
SCHEDULE A



OFFICIAL PLAN AMENDMENT NO. _____
TO SCHEDULE 8-B
NATURAL HERITAGE AREA 'B'

That Schedule 8-B, Natural Heritage Area 'B', to the City of Kingston Official Plan is amended by removing the Significant Woodland, Contributory Woodland, and Unevaluated Wetland designations of lands shown as "Remove Significant Woodland, Contributory Woodland, and Unevaluated Wetland" on Schedule B attached hereto and being part of this amendment.

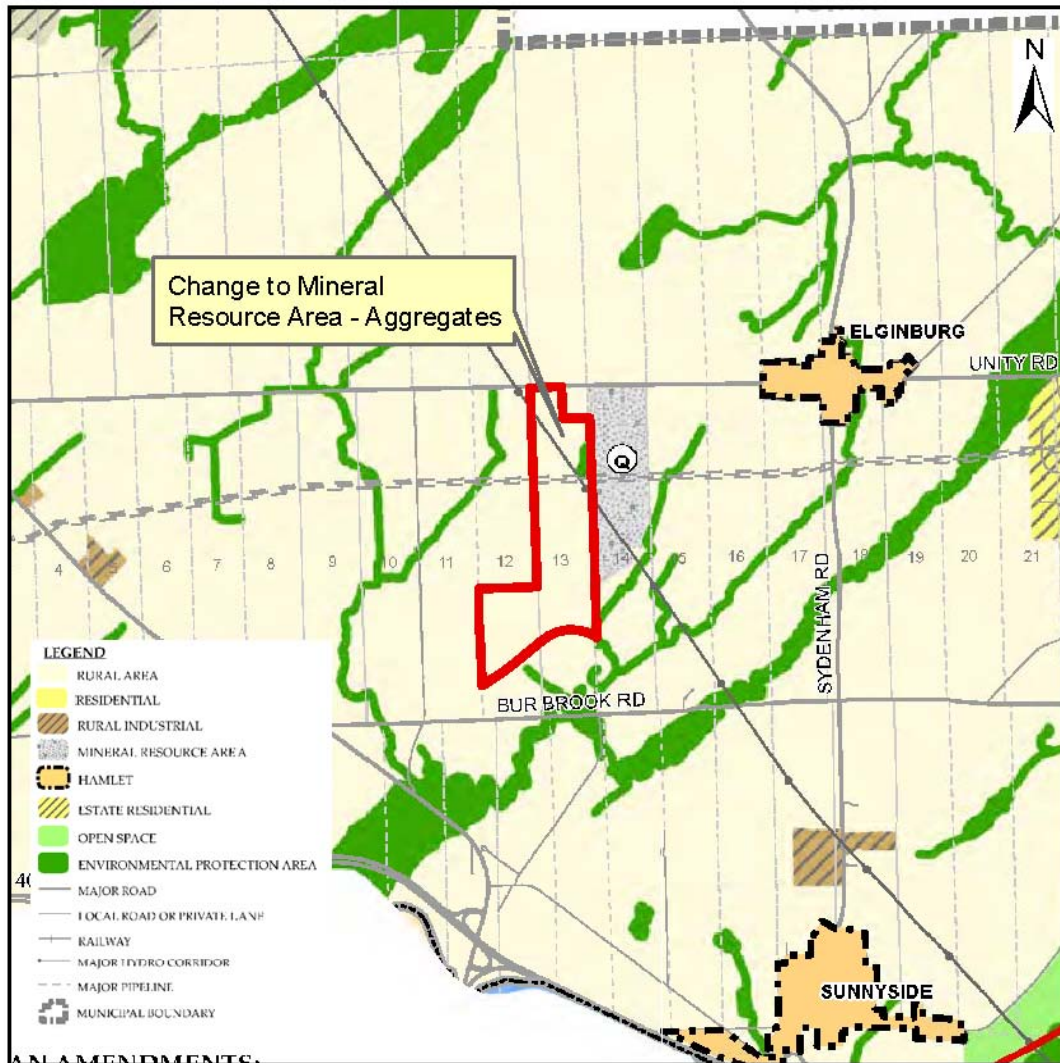
SCHEDULE B



OFFICIAL PLAN AMENDMENT NO. _____
TO SCHEDULE 3-B
LAND USE

That Schedule 3-B, Land Use, to the City of Kingston Official Plan is amended by changing from Rural Area and Environmental Protection Area the designations of lands shown as "Change to Mineral Resource Area - Q" on Schedule C attached hereto and being part of this amendment.

SCHEDULE C



APPENDIX B

ZONING BY-LAW AMENDMENT TO BY-LAW 76-26

