

**PLANNING RATIONALE FOR
1156 JINKINSON ROAD ZONING BY-LAW AMENDMENT APPLICATION
SOUTHERN HALF OF LOT 12, CONCESSION XI
FORMER GEOGRAPHIC TOWNSHIP OF GOULBOURN
CITY OF OTTAWA**

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PLANNING RATIONALE

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PLANNING RATIONALE

1.0 INTRODUCTION

This Planning Rationale has been prepared by J.L. Richards & Associates Limited (JLR) on behalf of Thomas Cavanagh Construction Limited (Cavanagh) to support the application for a Zoning By-law Amendment for 1156 Jinkinson Road (Subject Property). An Amendment is required in order to permit the establishment of the Henderson II Quarry adjacent to an existing quarry ('Henderson I Quarry') onto the Subject Property. It is proposed that the lands be rezoned from Mineral Reserve Zone (MR) to the Mineral Extraction Zone (ME) with an extraction limit setback 50 metres from the southwestern property line.

Cavanagh operates a number of pits and limestone quarries in the Ottawa area. The materials are used in the Ottawa area for road construction and for site preparation for commercial and residential developments. In order to enable the continued long-term supply of aggregate products to the western end of Ottawa, Cavanagh proposes to license, under the *Aggregate Resource Act* (ARA), the Subject Property as a Class 'A' operation. The proposed development is referred to as the 'Henderson II Quarry'.

1.1 Purpose

A Planning Rationale is required by the City of Ottawa (City) to provide planning support for all Zoning By-law Amendment applications. As such, this Planning Rationale outlines the various land use aspects of the proposal which support the development model currently being used in the City. This Report also demonstrates how the proposed development will be consistent with the Provincial Policy Statement and be in conformity with the City's Official Plan.

1.2 Background

1.2.1 Location and Site Description

The Subject Property is legally described as the 'Southern half of Lot 12, Concession XI, former geographic Township of Goulbourn, now known as the City of Ottawa'.

The Subject Property is approximately 53.1 ha in size. It is part of a larger property holding immediately to the east that is owned by Cavanagh and used as a quarry ('Henderson I Quarry'). The Subject Property has frontage on both Jinkinson Road and Highway 7. The Subject Property is located approximately 6 km southwest of the Highway 417-Highway 7 intersection in Stittsville.

As shown in Figure 1, the Subject Property currently consists of undeveloped rural lands.



Figure 1 – Aerial view of subject lands and adjacent Henderson I Quarry

1.2.2 Community Context

The Subject Property is located immediately south of Highway 7 and approximately 5.5 km west of the City's 'Urban Boundary'.

The Huntley Wetland Complex, a Provincially Significant Wetland (PSW), is located to the northwest. There is also a single detached farm dwelling (which is part of an active quarry operation) located across Highway 7 to the northeast. Vacant rural lands are

As also noted above, the Subject Property has frontage along Highway 7, which was recently expanded to four lanes. The Subject Property does not have direct access onto Highway 7. It is accessed via the existing Henderson I Quarry to the east, which intersects with Hazeldean Road, approximately 3 km to the east near the interchange for Highway 7.

2.0 DEVELOPMENT PROPOSAL

The intent of the proposed development is to expand the existing Henderson I Quarry onto the Subject Property. It is anticipated that both quarries will be operated simultaneously. The proposed extraction area covers an area of approximately 45.1 ha. Extraction activities will begin in the northeast corner as the excavation on the existing Henderson I Quarry approaches. Quarry operations will then advance to the south and southwest. Similar to the Henderson I Quarry, the proposed Henderson II Quarry will be developed in three lifts, which may operate simultaneously depending on rock quality and market demand.

The proposed quarry depth is 32 m below ground surface (mbgs) at the eastern corner of the proposed extraction area. The anticipated lowest quarry floor elevation will be 112 m above sea level (masl). The depth of the quarry along the boundary that is adjacent to the PSW would be approximately 23 mbgs.

A Zoning By-law Amendment is necessary to allow the development of the Henderson II Quarry.

2.1 Existing Provincial Approvals

The existing Henderson I Quarry is operated in accordance with the requirements of an existing Certificate of Approval (CofA) for Industrial Sewage Works and a Permit to Take Water (PTTW). The proposed Henderson II Quarry would also be operated in accordance with a new or amendment Environmental Compliance Approval (ECA) for industrial sewage works and a new or amended PTTW.

The Henderson I Quarry operates under an Amended CofA for Industrial Sewage Works No. 7448-7HENB5 that allows the establishment of sewage works for the collection, transmission, treatment and disposal of up to 75 L/second of surface water and groundwater collecting within the confines of the quarry, consisting of one pumping

sump, one 3,200 m³ settling pond, and all controls and appurtenances for the operation of the sewage works.

The Henderson I Quarry operates under a PTTW for Ground Water NUMBER 2542-7QVK9D. The PTTW allows water takings of a maximum of 6,480,000 L/day.

2.2 Natural Environment

An Environmental Impact Statement (EIS) was completed by Golder Associates Ltd. for the proposed Henderson II Quarry. The EIS was based on the 'Terms of Reference for an Environmental Impact Study in the City.

The EIS concluded that, with an ecologically based rehabilitation plan and mitigation measures, there will be no negative impacts to the significant natural features and functions from the proposed Henderson II Quarry.

The mitigation measures regarding the PSW and Species at Risk are highlighted below.

2.2.1 Wetland

“Setbacks

A 50 m setback is proposed between the boundary of the Huntley Wetland and the western boundary of the Limit of Extraction. This setback will be excluded from the extraction area and no development or site alteration will be undertaken in this area. Existing natural vegetation in the setback areas will be maintained to the extent practical. Additionally, as an added precaution, during construction and earth-moving operations, sediment control measures will be in place to prevent the runoff of suspended solids from entering the wetland areas. All work will be conducted during periods of limited precipitation, wherever possible, and dust suppression protocols will be developed to minimize nuisance dust emissions. The setback from Huntley Wetland will also effectively protect sensitive species that are present within the wetland (e.g. western chorus frog) as well as those that have the potential to be present (i.e., eastern ribbonsnake, milksnake) and protect the potential turtle breeding habitat of Huntley Wetland from the effects of proposed extraction.

Buffer Plantings

Specific treatments to the lands within the setback area can be used to enhance the function of the setback in providing a buffer against project impacts and also

*to provide overall habitat benefits for specific species. Representative upland and facultative wetland species will be planted in nodal clusters within the setback area. This should include species such as white cedar, balsam poplar (*Populus balsamifer*) and native willows (*Salix* spp.). The nodal planting concept allows active vegetation establishment in combination with facilitating natural succession processes. In addition to providing wildlife habitat, this will help mitigate dust from the proposed quarry operations. Nodal planting details will be generally described on the site plans. This concept is described in more detail in Section 8.1.*

Water Balance Regulation

During operations, the groundwater and surface water flows to the Huntley Wetland will be maintained. Based on the post-extraction modelling conducted in the Hydrological Assessment (Golder 2013), intercepted flows from the existing Henderson I and the proposed Henderson II Quarries will continue to be discharged to the northern and southern catchments of the Huntley Wetland. As such, the net change in the wetland water balance is expected to be negligible.”

2.2.2 Species at Risk

Suitable habitat for Blanding’s turtle, western chorus frog, eastern ribbonsnake and snapping turtle was identified in the PSW.

“Exclusion Fencing

Exclusion fencing should be installed along the western extent of the site, outside the proposed license area, to prevent the migration of Blanding’s turtle, western chorus frog, eastern ribbonsnake and snapping turtle through the site. Details of the fencing include the following:

- The exclusion fencing should consist of a silt fence or other similar fencing with fine mesh hardware cloth (on wildlife side of fence) buried at least 5 cm into the soil (Connecticut DEP 2006);*
- All fencing should be securely fastened to structures or culverts. There should be no gaps between the fence posts and structures or culverts through which reptiles could pass;*
- To prevent individuals from climbing the fence, the stakes or posts should be placed on the quarry excavation side of the fence and/or as recommended by MNR; and,*

- *The exclusion fencing should be installed prior to extraction operations, during a period of inactivity for reptiles and amphibians (i.e., November through April) and maintained throughout the active season for reptiles (May to October).*

The exclusion fencing will also divide the active quarry lands from those that remain natural, thereby strengthening the setback of the site from Huntley Wetland.

Worker Awareness Program

As a precautionary measure to mitigate the potential for injuring reptiles or amphibians (including milksnake) found on or in the vicinity of the site, a worker awareness program should also be implemented.

The awareness program should include the following:

- *Notification of worker obligations, liabilities and responsibilities under the Endangered Species Act;*
- *Education for the identification of Blanding's turtle, western chorus frog, eastern ribbon snake and milksnake, their life history and behaviour so workers can avoid harming an animal in their daily routine;*
- *Routine monitoring for Blanding's turtle, western chorus frog, eastern ribbonsnake and milksnake prior to starting up equipment in the morning;*
- *Explanation of a procedure in the event of observation or injury to a Blanding's turtle, western chorus frog, eastern ribbonsnake, snapping turtle or milksnake on the site. In general, in the event of injury to an animal or an attempt at relocating a species, an effort should be made to involve the MNR Species At Risk biologist in Kemptville; and,*
- *Precautionary signage along access road entrances/exits from the site to alert truck drivers to the potential for reptiles and amphibians on the roadways.*

By implementing the mitigation measures outlined above, it is expected that there will be no negative impacts to Blanding's turtle, western chorus frog, eastern ribbonsnake, snapping turtle or milksnake as a result of the proposed aggregate extraction."

2.3 Zoning By-law Amendment

The Subject Property is currently zoned Mineral Aggregate Reserve Zone (MR) under the City's Zoning By-law (2008-250 Consolidation). The purpose of the MR Zone is to:

- *identify those areas that are designated as Sand and Gravel Resource Area or Limestone Resource Area in the Official Plan for which at present there is no licensed mineral extraction operations, and are not along a rural truck route; and*
- *identify those lands where as yet unexploited mineral aggregate resources exist, until a request is made for a rezoning to the Mineral Extraction – ME zone to permit a mineral extraction operation.*

Current permitted uses in the MR Zone are limited to agricultural use, environmental preserve and education area, equestrian establishment, forestry operation, and a kennel. The MR Zone acts as a holding zone for City's Mineral Extraction (ME) Zone. Therefore, a Zoning By-law Amendment is required in order to allow the proposed Henderson II Quarry, in accordance with the land use designation established in the City's Official Plan.

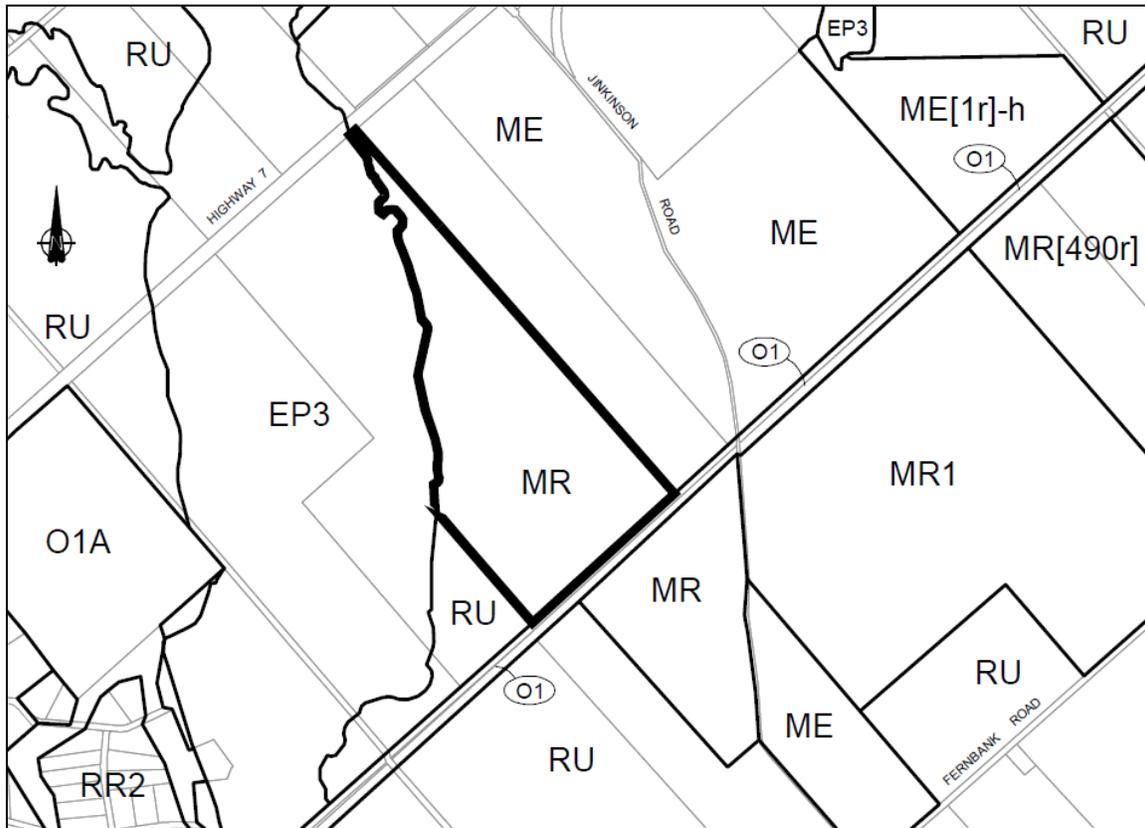


Figure 3 – Existing zoning on and around Subject Property

The proposed Zoning By-law Amendment is to rezone the Subject Property to the Mineral Extraction (ME) Special Exception Zone. The ME Zone permits licensed mineral extraction operations, and a limited range of compatible uses and interim uses which would not jeopardize the future mineral extraction potential. The ME Zone also imposes regulations on the mineral extraction operation to minimize impacts on the surrounding area. In the ME Zone, all uses permitted in the MR Zone are also permitted, in addition to a leaf and yard waste composting facility, and a mineral extraction operation. The proposed development will establish a 50 m extraction setback from the adjacent Provincially Significant Wetland (PSW). The proposed Henderson II Quarry is able to meet all other provisions of the ME Zone.

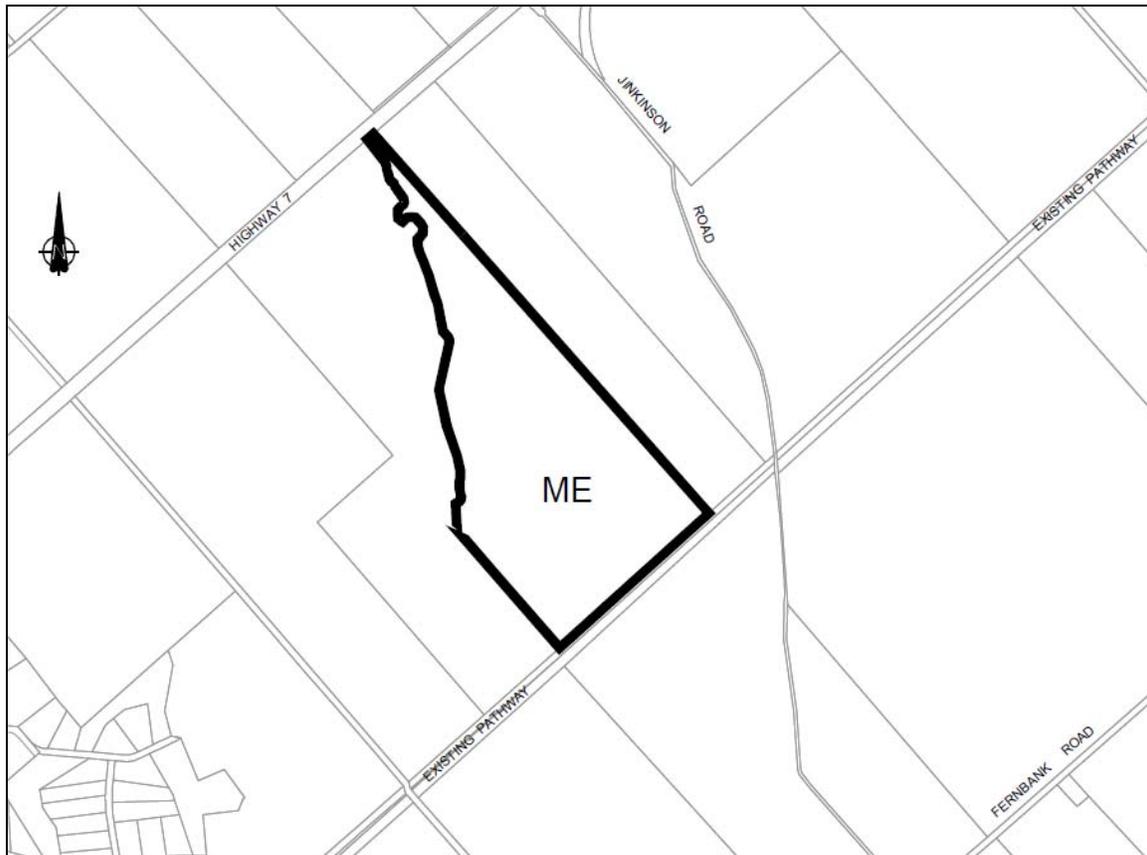


Figure 4 – Proposed Zoning for Subject Property

3.0 POLICY CONTEXT

3.1 Provincial Policy Statement 2014

The Provincial Policy Statement (PPS) focuses on long-term protection of resources, such as mineral aggregates. Section 2.5 sets out the policies for mineral aggregate resources. Those policies which affect this Zoning By-law Amendment Application are:

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.

2.5.2.2 Extraction shall be undertaken in a manner which minimizes social and environmental impacts.

The proposed Henderson II Quarry represents continued long-term extraction of an aggregate resource that is close to the markets in the west end of Ottawa and major

transportation routes. The Subject Property is also in an area where there are a number of licensed aggregate quarries and very few adjacent residential developments. Thus, the potential social effects from the proposed Quarry will be limited.

The proposed Quarry is, however, adjacent to a PSW, and potential environmental impacts will need to be studied and mitigated in that particular area. Section 2.1.6 of the PPS indicates that:

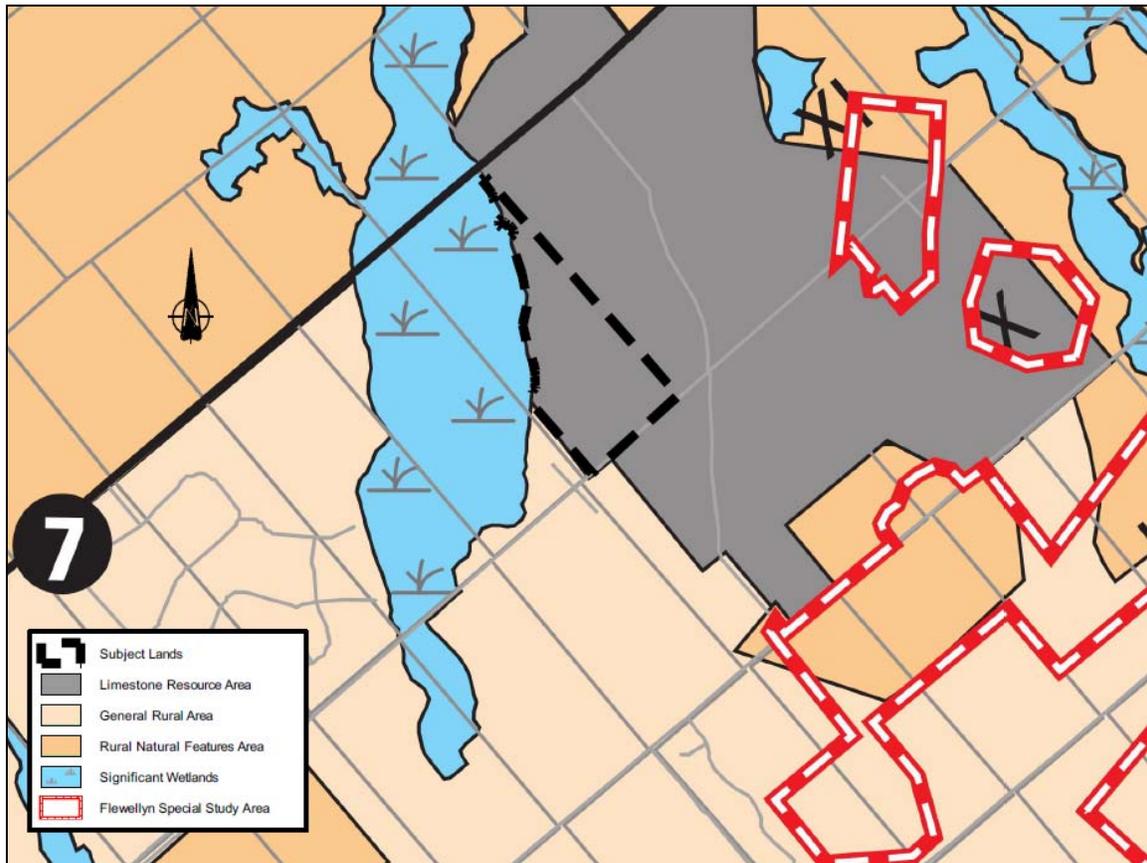
2.1.8 Development and site alteration shall not be permitted on adjacent lands to the natural heritage features and areas ... unless the ecological function of the adjacent lands has been evaluated and it has been demonstrated that there will be no negative impacts on the natural features or on their ecological functions.

As highlighted earlier, Cavanagh retained Golder Associates Ltd. to undertake an EIS. It concluded that, with an ecologically based rehabilitation plan and mitigation measures, there will be no negative impacts to the significant natural features and functions from the proposed Henderson II Quarry.

3.2 City of Ottawa Official Plan 2003-203

The City's Official Plan, adopted by City Council in May 2003, has been updated and amended numerous times by both Council and the Ontario Municipal Board. For the purposes of this Planning Rationale, the on-line consolidated version of the Official Plan for Official Plan Amendment 150 was used as a reference.

The Subject Property is located within the Rural Area. Schedule 'A' of the Official Plan shows the Subject Property is designated as a 'Limestone Resource Area' (see Figure 5) within the Rural Area.



**Figure 5 – Existing City of Ottawa Official Plan Schedule A:
'Limestone Resource Area'**

Section 3.7.4 of the Official Plan provides a framework for the Limestone Resource Area, as follows:

“protecting resources close to local markets will help ensure the availability of the resource at reasonable prices. Keeping hauling distances short will also minimize the environmental and community impacts of this traffic. Care must be taken to ensure that the environmental and social impact of mineral resource extraction is minimized. To this end, extractive operations must maintain good operating standards as well as have a viable rehabilitation plan.”

The Limestone Resource Area designation permits the following uses:

- pits and wayside pits
- quarries
- wayside quarries
- portable asphalt plants and other associated uses

- concrete batching plant
- existing or new farming
- forestry
- small-scale open-air recreational uses
- conservation and natural resource management activities
- temporary non-residential uses and recycling uses
- detached dwelling and accessory buildings subject to conditions
- underground mining.

Policies 6 through 8 of Section 3.7.4 outline zoning for pits and quarries. It states that:

- *All pits and quarries licensed under the Aggregate Resources Act should be rezoned to mineral extractive use in the City's Zoning By-law;*
- *Prior to the establishment of any new pit or quarry, the City requires that the lands be rezoned to specifically permit the mineral extraction use; and*
- *The City requires the completion of an Environmental Impact Statement prior to making a decision on any application for rezoning or commenting on a licensing request to establish a new or expanded pit or quarry that may potentially affect the significant features or ecological functions of the environmental designations shown on Schedule A.*

Policy 9 of Section 3.7.4 of the OP sets out the requirements for studies for the evaluation of a proposed new quarry or expansion of an existing quarry. These study requirements and the studies completed for the proposed Henderson II Quarry are indicated below.

Study Requirement per Policy 9 of Section 3.7.4	Status of Study for the proposed Henderson II Quarry
a. <i>Anticipated noise, dust and vibration levels that illustrate that the Ministry of Environment guidelines and criteria will be satisfied</i>	Included in completed Acoustical Study and Blasting Impact Study
b. <i>Rationale for proposed haul routes, expected traffic volumes and entrance/exit design to show that the road system can safely and efficiently accommodate the proposed truck traffic. This may include provision for upgrading of local City roadways leading to an arterial road and on-going maintenance requirements along such route so long as the pit or quarry is in operation</i>	A Transportation Impact Brief has been completed
c. <i>Impact on neighbours from noise, dust, vibration, truck traffic, etc., due to the duration of the extraction operation in hours per day and number of days per week</i>	Included in completed Acoustical Study and Blasting Impact Analysis
d. <i>The elevation of the groundwater table on and surrounding the site</i>	A Level 1 and Level 2 Hydrogeological and Hydrological Report has been completed
e. <i>Any proposed water diversion, water taking, storage and drainage facilities on the site and points of discharge to surface waters. An impact assessment will address the potential effects on the following features on or adjacent to the site, where applicable: i. Water wells, ii. Springs, iii. Groundwater, iv. Surface watercourses and bodies; v. Wetlands, woodlands, and fish and wildlife habitat;</i>	A Level 1 and Level 2 Hydrogeological and Hydrological Report has been completed An Environmental Impact Statement has been completed
f. <i>Adjacent and nearby land uses and an assessment of the compatibility of the proposed development with existing land uses. This includes possible completion of an Environmental Impact Statement as referenced in Section 4.7.8</i>	Included in completed Environmental Impact Statement
g. <i>If within an Agricultural Resource Area on Schedule A, the agricultural classification of the proposed site and the proposed agricultural rehabilitation techniques if the site is Class 1, 2 or 3 soils and extraction is not below the water table</i>	The Subject Property is not located within an Agricultural Resource Area on Schedule A of the Official Plan
h. <i>The proposed after-use and rehabilitation plan</i>	Included in completed Environmental Impact Statement

A Phase 1, 2 and 3 Archeological Resource Assessment was also completed as part of this approval process (see Section 3.2.4).

Section 3.2.1 of the Official Plan provides a framework for development on or adjacent to Significant Wetlands. The Plan states that:

- “5. Development and site alterations will not be permitted within 120m of the boundary of a Significant Wetland unless an Environmental Impact Statement demonstrates that there will be no negative impacts (as defined by Section 4.7.8) on the wetland or its ecological function. The requirements of the Environmental Impact Statement may vary, as described in Section 4.7.8.*
- 6. The requirements of the Environmental Impact Statement may vary, depending on such matters as the scale of the proposed development, the nature of the site, the availability of comprehensive studies for the area, and those matters identified in Section 4.7.8.*
- 7. Any change or interference within or adjacent to a Wetland may require a permit from the Rideau Valley Conservation Authority, under the Ontario Regulation 174/06, the Mississippi Valley Conservation under Ontario Regulation 153/06 and the South Nation River Conservation under Ontario Regulation 170/06.”*

As stated earlier, the proposed Quarry is situated adjacent to an existing quarry which is located close to markets, major transportation routes and other quarries. The EIS further concluded that there will be no negative impacts to the significant natural features and functions from the proposed Quarry, subject to the implementation of the recommended ecologically based rehabilitation plan and mitigation measures.

3.2.1 Roads and Pathways

Jinkinson Road, along the northeastern boundary of the existing Henderson I Quarry, is classified as an existing Collector Road according to Schedule G - Rural Road Network of the City's Official Plan. The remainder of Jinkinson Road, running parallel to Highway 7 and joining Hazeldean Road to the east of the Highway 7 / Hazeldean Road interchange, is classified as a proposed Collector Road in the Official Plan.

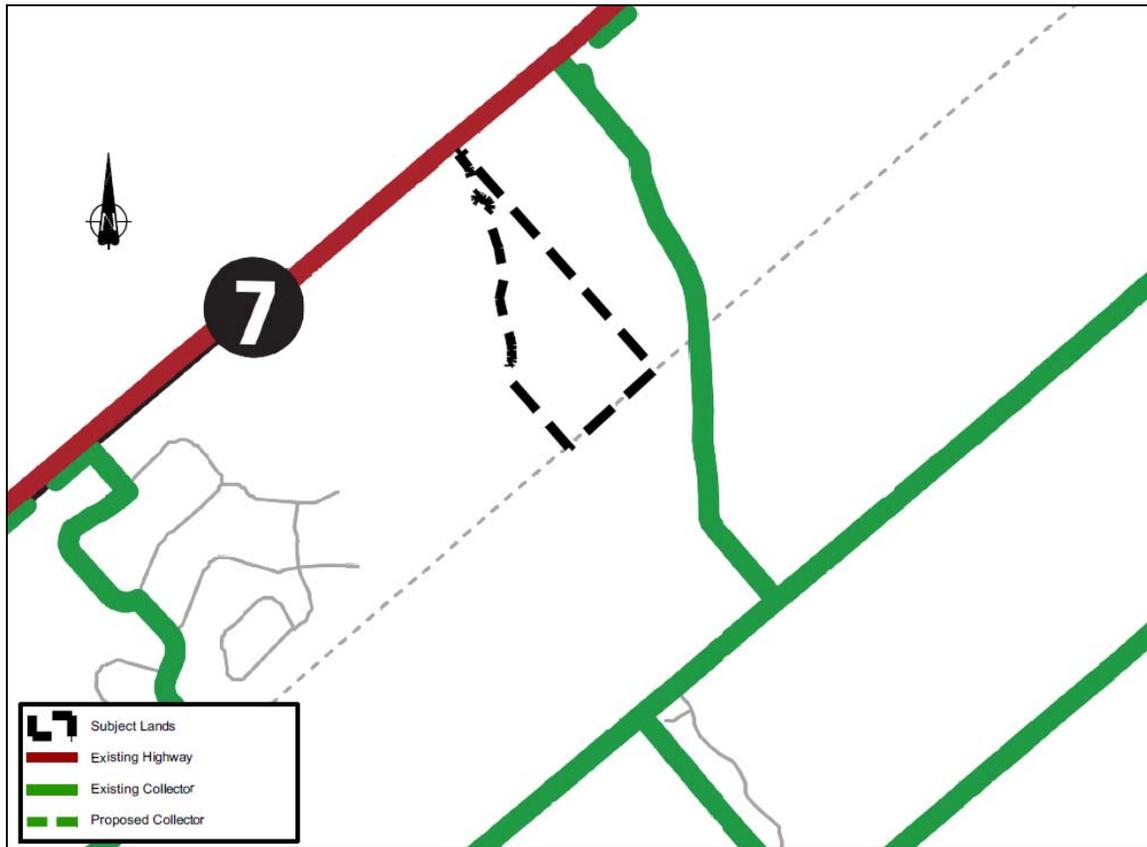


Figure 6 - City of Ottawa Official Plan Schedule G Rural Road Network

According to Schedule J of the Official Plan, there are existing on-road cycling routes along the entire length of Jinkinson Road from Hazeldean Road and continuing to Fernbank Road. An off-road multi-use pathway running adjacent to the southern boundary of the proposed Quarry is also shown. This pathway is the TransCanada Trail. The proposed Quarry is not expected to further impact the TransCanada Trail as this area of the trail already bounds the existing Henderson I Quarry as well other quarries in the area. The Henderson I Quarry's extraction limit is setback 30 metres from the TransCanada Trail. The extraction limit of the proposed Henderson II Quarry will also be setback 30 metres from the trail.

Schedule J also shows that Highway 7 is a Scenic Entry Route. The Official Plan indicates that development adjacent to a Scenic Entry Route may be required to follow design guidelines which create a safe and attractive environment for travellers. As stated earlier, the proposed Quarry will utilize a naturalized berm to screen operations from Highway 7.

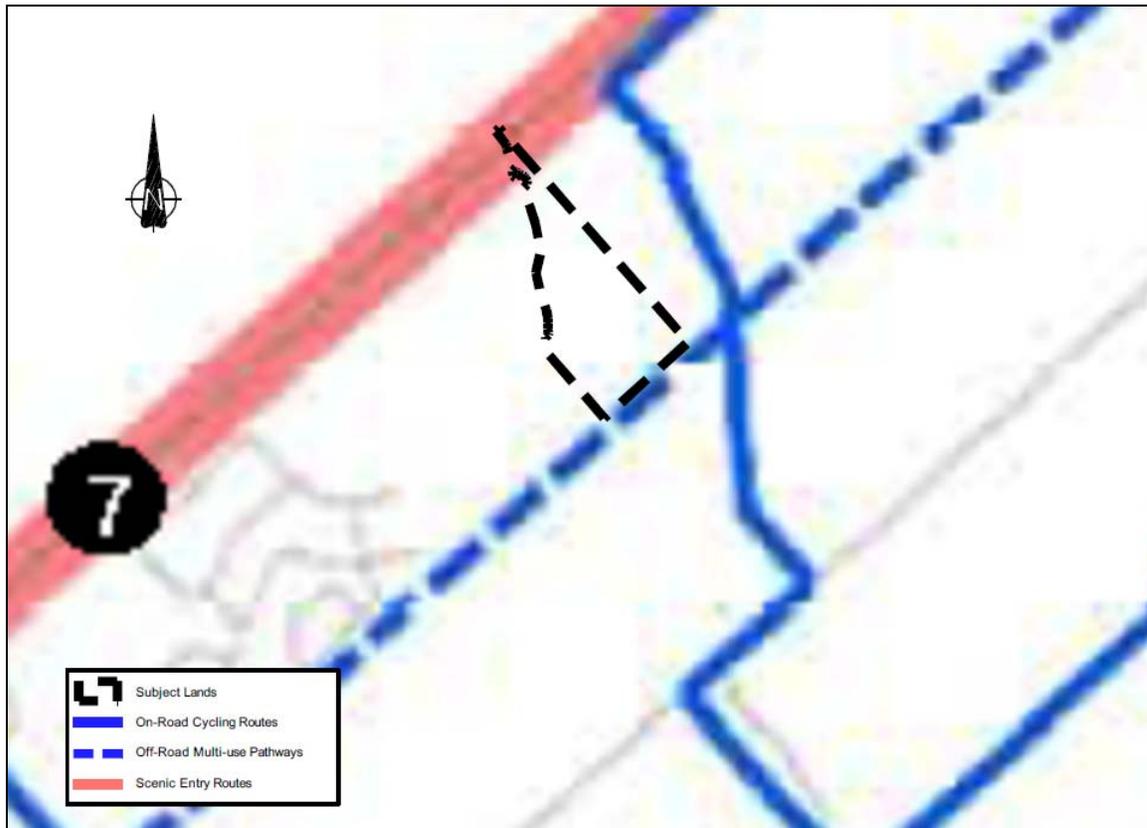


Figure 7 - City of Ottawa Official Plan Schedule J Rural Active Transportation Routes

Pre-consultation with the City identified that a Traffic Impact Report was required as part of this Zoning By-law Amendment Application to address potential traffic impacts from the proposed Quarry. The completed Traffic Impact Report concluded that:

- “1. Operation within the Henderson quarry from Phase I to Phase II will not result in any new trips being generated by the site.

4. The Jinkinson Road – Hazeldean Road intersection is expected to operate at an acceptable LOS C and a v/c 0.28 for the critical lane movement (Jinkinson Road northbound left) for the 2020 horizon year.

Based on the above findings, it is recommended that the City approve the development as proposed.”

3.2.2 Hydrogeological

The Subject Property is identified on Schedule K of the City's Official Plan as having organic soils on its southwestern portion. The southern half of the Subject Property is also shown to be located within a Wellhead Protection Area.

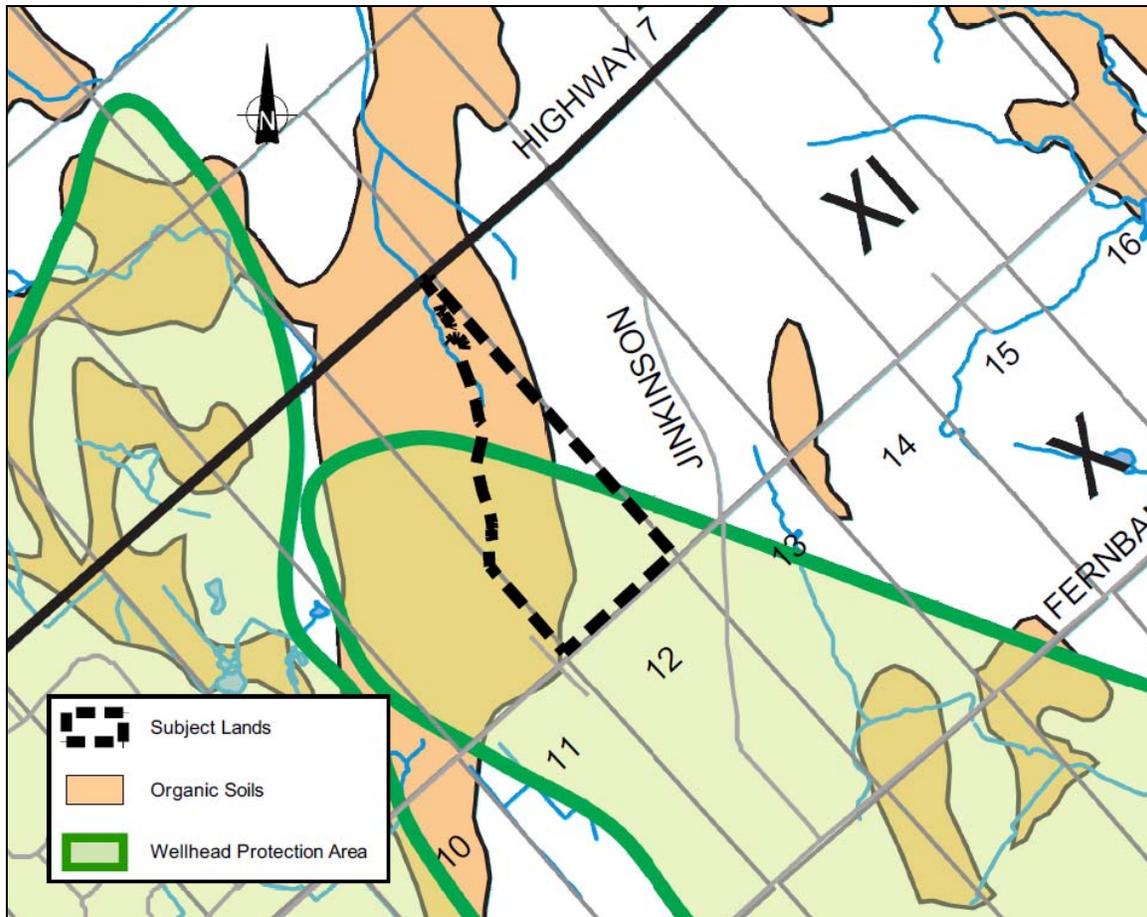


Figure 8 - City of Ottawa Official Plan Schedule K Environmental Constraints

Section 4.8.2 of the Official Plan indicates that development applications in Wellhead Protection Areas will be assessed for the level of risk to municipal water supplies.

Pre-consultation with the City identified that a Hydrogeological Report was required as part of this Zoning By-law Amendment Application to address potential groundwater impact, water balance, and wellhead protection impacts from the proposed Quarry. The completed Level 1 and Level 2 Hydrogeological and Hydrological Report concluded that:

“Overall, it is not expected that the development of the proposed Henderson II Quarry (based on a 50-metre setback from the wetland) will have a negative impact on surface water or groundwater receptors during the operational period, and it is not expected that the implementation of mitigation measures will be required during the operational period.

Following completion of extraction activities of the combined Henderson I and II quarries, quarry dewatering will be discontinued and the quarry excavation will be allowed to flood to form a lake under rehabilitated conditions. The lake level in the rehabilitated quarry will be at the lowest point around the edge of the excavation. With a 50-metre setback from the wetland, the level of the rehabilitation lake would be approximately 134.9 masl. The lake would be kept full through precipitation, runoff as well as groundwater seepage. Water levels in the upper intervals of the on-site monitoring wells located on the east side of the property (BH08-11 and BH08-12) are generally above this elevation thus groundwater should flow towards the rehabilitated quarry from that direction.

Water levels in the upper intervals of the western on-site monitoring wells are generally slightly below the predicted lake elevation. The water elevation in the wetland is approximately 133.8 masl thus the lake would likely be at a higher elevation than the wetland and thus the wetland will not flow into the quarry lake. Surface water captured by the lake following rehabilitation conditions will drain by gravity to the wetland.

Overall, it is not expected that the development of the proposed Henderson II Quarry will have a negative impact on surface water or groundwater receptors under rehabilitated conditions and it is not expected that the implementation of mitigation measures will be required during rehabilitated conditions”

Section 9.5 of the report also concluded that:

“As the proposed Henderson II Quarry is located approximately 13 kilometres from the King’s Park wellhead, it is unlikely that activities at the proposed Henderson II Quarry site will have a negative impact on water quality or quality in the King’s Park communal wells. Deep wells, drilled nearby to the proposed Henderson II Quarry have identified a thickness of approximately 150 metres of limestone/dolostone above the Nepean sandstone aquifer. The numerical model has predicted that the impacts of dewatering will extend to approximately 50 metres below the bottom of the quarry. As a result of this, there is approximately 70 metres of limestone/dolostone above the Nepean sandstone aquifer which will remain unimpacted by the quarry operations.”

3.2.3 Natural Environment

No Natural Heritage System elements have been identified on the Subject Property, as per Schedule L3 of the Official Plan. However, the PSW adjacent to the Subject Property is identified as part of the City's natural heritage system. As stated earlier, the EIS concluded that there will be no negative impacts to the significant natural features and functions from the proposed Quarry, subject to the implementation of the recommended ecologically based rehabilitation plan and mitigation measures.

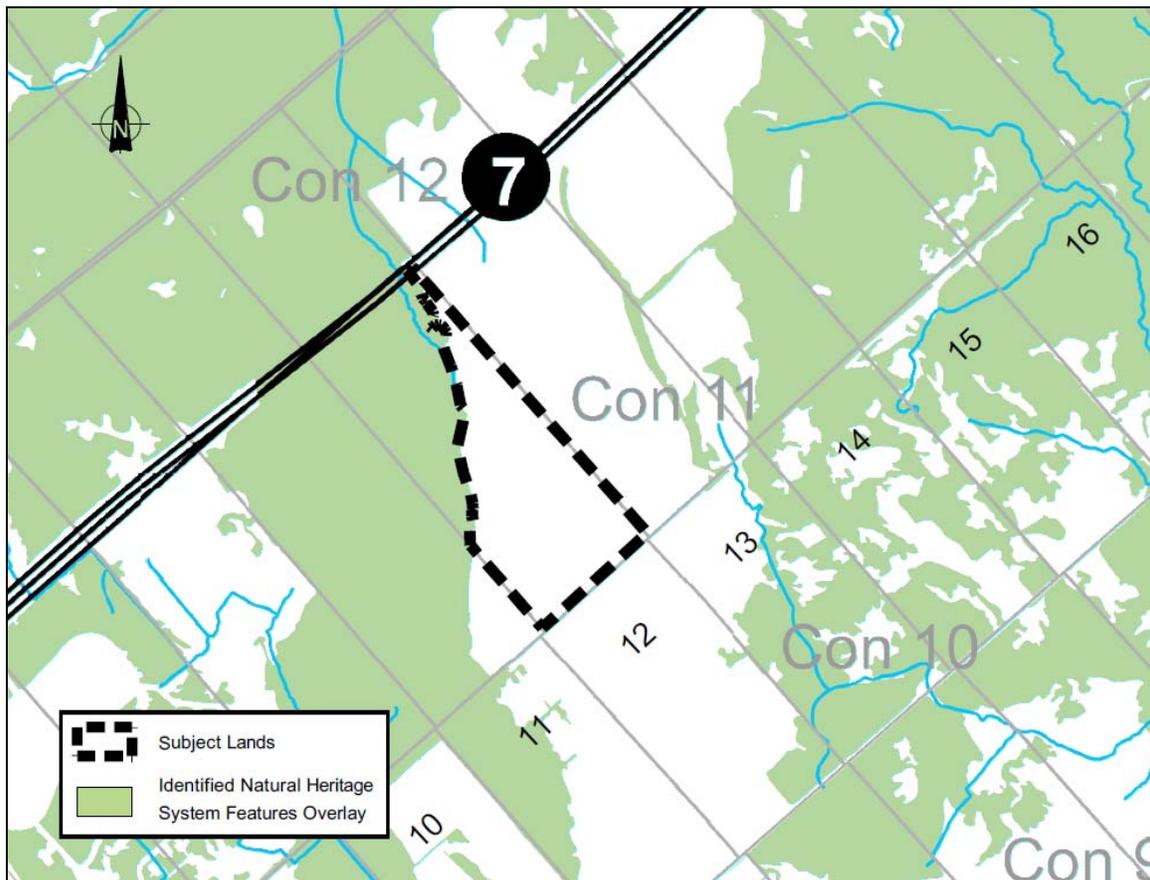


Figure 9 - City of Ottawa Official Plan Schedule L3 Natural Heritage System Overlay (West)

3.2.4 Archaeological

The Subject Property is identified on the City's eMap database as having an area of archaeological potential. As such, the policies in Section 4.6.2 of the Official Plan indicate that

“Where development is proposed on land where archaeological potential exists, as identified on the City of Ottawa map, Areas of Archaeological Potential, the City will require an archaeological resource assessment to be conducted by an archaeologist licensed under the Ontario Heritage Act, as a condition of development approval.”

Pre-consultation with the City identified that an Archaeological Resource Assessment was required as part of this Zoning By-law Amendment Application. The results of the Phase 1 Archaeological Report recommended the completion of a Phase 2 assessment, which identified a possible hearth feature and suspected lithic artifacts; this in turn triggered the completion of a Phase 3 Assessment. The Phase 3 Archaeological Report concluded that:

“Although the soil conditions and the presence of chert were favourable for such a site, no artifacts or culturally significant features could be identified. As a result, no further archaeological assessment of the Henderson Quarry Site (BhFx-A) is recommended.”

The Ministry of Culture issued a letter of clearance for the Phase 3 Archeological Assessment on March 15 2012 (see appendix A).

3.2.5 Noise and Vibration

Pre-consultation with the City identified that a Noise and Vibration Impact Analysis was required as part of this Zoning By-law Amendment Application. As such, an Acoustical Study and Blast Impact Analysis were completed as part the application process.

The Acoustical Study concluded that:

“...noise from the operation at nearby receptors is in compliance with the sound level limits as set out MoE Guideline NPC-3002, provided that the mitigation measures described in Section 5 followed.

In summary:

- *All equipment may operate during the Daytime period, 07:00 to 19:00.*

- *Restrictions apply to the operation of Working Face equipment and the Wash Plant during the Evening/Night-time period, 19:00 to 07:00.*
- *The noise mitigation measures are described in Section 5.*

The mitigation measures and modes of operation are based on latest noise data available on equipment proposed for the quarry operation. Some of the equipment has yet to be purchased. It is recommended the noise data be reviewed and updated at the time of implementation. Where necessary, mitigation measures and modes of operation should be modified in order to ensure that MoE noise guidelines are satisfied at the noise sensitive receptors.”

The Blast Impact Analysis concluded that:

“Blasting operations required for mineral extraction at the proposed Cavanagh Henderson Quarry II can be carried out safely and well within governing guidelines set by the Ministry of the Environment.

Modern blasting techniques will permit blasting to take place with explosive charges below allowable charge weights ensuring that blast vibrations and overpressure will remain minimal at the nearest receptors.”

4.0 CONCLUSION

This Report has been prepared in support of an application for a Zoning By-law Amendment for the Cavanagh Henderson II Quarry which is located adjacent to an existing Cavanagh Henderson I Quarry operation.

The proposed Zoning By-law Amendment Application is consistent with the Provincial Policy Statement in that the proposed use: is permitted in the Rural Area; and represents continued long-term extraction of an aggregate resource that is close to the markets in the west end of Ottawa and major transportation routes. It has also been demonstrated through the completion of an EIS, that all potential impacts of the proposed development being adjacent to the Provincially Significant Wetland are able to be mitigated.

The City's Official Plan designates the subject lands as Limestone Resource Area. Based on the above analyses and the conclusions of all the required studies, it is JLR's

opinion that the proposed Henderson II Quarry conforms to the policies and guidelines of the City's Official Plan.

Prepared by:



Katie Morphet, MCIP, RPP

Reviewed by:



Timothy F. Chadder, MCIP, RPP

A P P E N D I X ' A '

**Ministry of Tourism, Culture and Sport – Stage 3 Archeological
Assessment Clearance Letter**

Ministry of Tourism,
Culture and Sport

Ministère du Tourisme,
de la Culture et du Sport

Culture Programs Unit
Programs and Services Branch
Culture Division
435 S. James St., Suite 334
Thunder Bay, ON, P7E 6S7
Telephone: 807-475-1632
Facsimile: 807-475-1291

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Email: andrew.hinshelwood@Ontario .ca

March 15, 2012

Ibrahim Nouredine
Golder Associates Ltd.
32 Steacie Drive
Kanata, ON K2K 2A9

RE: Entry into the Ontario Public Register of Archaeological Reports: Archaeological Assessment Report Entitled, *Stage 3 Archaeological Assessment, Proposed Henderson Quarry II Site BhFx-A, Lot 12, Concession 11, Geographic Township of Goulbourn, Ottawa, Ontario.* Dated October 18, 2011, received by MTC Toronto Office on November 24, 2011.

**MTCS Project Information Form Number P350-003-2011
MTCS RIMS Number 06AG115**

Dear Mr. Nouredine,

This office has reviewed the above-mentioned report, which has been submitted to this Ministry as a condition of licensing in accordance with Part VI of the Ontario Heritage Act, R.S.O. 1990, c 0.18. This review has been carried out in order to determine whether the licensed professional consultant archaeologist has met the terms and conditions of their licence, that the licensee assessed the property and documented archaeological resources using a process that accords with the 2011 *Standards and Guidelines for Consultant Archaeologists* set by the Ministry, and that the archaeological fieldwork and report recommendations are consistent with the conservation, protection and preservation of the cultural heritage of Ontario.*

The report recommends the following:

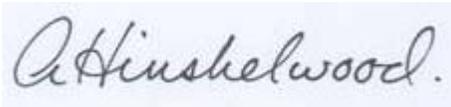
That no further archaeological work is required for the Henderson Quarry II Site and as a consequence that the Ministry of Tourism, Culture and Sport issue a letter of clearance for this area.

That samples collected as part of this investigation will remain with the licensees at Golder Associates Ltd. until an appropriate repository can be identified.

Based on the information contained in the report, the ministry is satisfied that the fieldwork and reporting for the archaeological assessment is consistent with the ministry's 2011 *Standards and Guidelines for Consultant Archaeologists* and the terms and conditions for archaeological licences. This report will be entered into the Ontario Public Register of Archaeological Reports. Please note that the ministry makes no representation or warranty as to the completeness, accuracy or quality of reports in the register.

Please feel free to contact me with any concerns or questions regarding this letter.

Yours,

A handwritten signature in cursive script that reads "A Hinshelwood." The signature is written in black ink on a light blue rectangular background.

Andrew Hinshelwood
Archaeology Review Officer

cc. Archaeology Licensing Officer

* In no way will the Ministry be liable for any harm, damages, costs, expenses, losses, claims or actions that may result: (a) if the Report(s) or its recommendations are discovered to be inaccurate, incomplete, misleading or fraudulent; or (b) from the issuance of this letter. Further measures may need to be taken in the event that additional artifacts or archaeological sites are identified or the Report(s) is otherwise found to be inaccurate, incomplete, misleading or fraudulent.