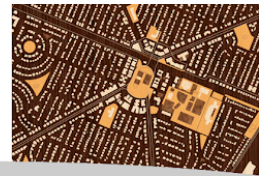
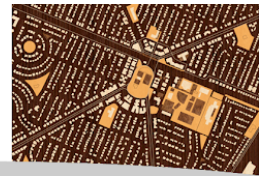


**Aggregate Resources Master Plan  
for the  
United Counties of Leeds and Grenville**

**January 19, 2022**



<b>1. Introduction.....</b>	<b>4</b>
<b>2. Legislative and Policy Context .....</b>	<b>7</b>
2.1 Planning Act .....	7
2.2 Provincial Policy Statement .....	8
<b>3. Overview of ARIP 183.....</b>	<b>14</b>
3.1 Selected Sand and Gravel Resource Areas.....	15
3.2 Selected Bedrock Resource Areas .....	16
<b>4. Overview of the Counties Official Plan.....</b>	<b>21</b>
<b>5. Review of Local Official Plans .....</b>	<b>34</b>
5.1 Township of Athens.....	35
5.2 Township of Augusta .....	40
5.3 Township of Edwardsburgh Cardinal.....	43
5.4 Township of Elizabethtown-Kitley.....	47
5.5 Township of Front of Yonge .....	48
5.6 Township of Leeds and the Thousand Islands.....	50
5.7 Village of Merrickville-Wolford .....	53
5.8 Municipality of North Grenville.....	56
5.9 Township of Rideau Lakes.....	57
5.10 Village of Westport.....	59
5.11 Summary of Mapping in the Local Official Plans.....	59
<b>6. What We’ve Heard.....</b>	<b>62</b>
6.1 Technical Steering Committee Meetings .....	62
6.2 Industry Stakeholder Meetings .....	63
6.3 Open House Meeting.....	64
6.4 Summary of Other Comments.....	65
6.5 Statutory Public Meeting .....	71
<b>7. Proposed Mapping.....</b>	<b>76</b>
7.1 Proposed Selected Bedrock Resource Area Map.....	76
7.2 Proposed Selected Sand and Gravel Resource Area Map .....	78
<b>8. Official Plan Recommendations.....</b>	<b>79</b>
8.1 Assessment Requirements.....	81
8.2 Assessment Exemptions .....	86

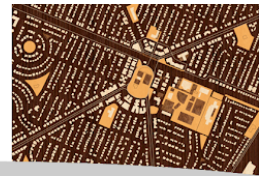


**8.3 New or Expanding Mineral Aggregate Operations .....87**  
**8.4 Mapping (Screening Tool) .....89**

**Appendix A: Bedrock Resource Constraints**

**Appendix B: Sand and Gravel Resource Constraints**

Draft



## 1. INTRODUCTION

Aggregates are required for virtually all types of construction and infrastructure and according to the Ontario Aggregate Resources Corporation in 2020, *"the economic activity generated by the industry begins with the aggregate production itself but also feeds industries which receive and use the raw materials: including cement and concrete products, other aggregate-based products (asphalt, chemical, clay, glass, etc.) and construction."* In 2020, there were 3,601 licenses for pits and quarries on private lands in southern and central Ontario and 167 million tonnes of aggregate was extracted, which equates to about 14 tonnes per person in Ontario.

The establishment of new pits and quarries has long been a polarizing process in Ontario. While extraction is intended to be an interim use and aggregates are required for virtually all types of construction and infrastructure, opposition to almost every new pit or quarry is commonplace, even though there is a need for aggregates. In recognition of this need, Provincial land use policies are very supportive of aggregate extraction. However, the current application process for new or expanding resource uses in Ontario requires an investment of several years and significant resources for detailed technical studies, with most applications ending up at

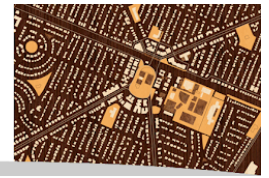
the Ontario Municipal Board (now the Ontario Land Tribunal ('OLT')).

The Planning Act identifies mineral aggregate resources as a matter of Provincial interest and requires that the Province and municipalities integrate consideration for such resources in land use planning decisions. The Provincial Policy Statement ('PPS') requires municipalities to identify and protect mineral aggregate resources in their respective Official Plans for long-term use.

The PPS defines deposits of mineral aggregate resources as follows:

*Deposits of mineral aggregate resources: means an area of identified mineral resources, as delineated in Aggregate Resource Inventory Papers or comprehensive studies prepared using evaluation procedures established by the Province for surficial and bedrock resources, as amended from time to time, that has a sufficient quantity and quality to warrant present or future extraction.*

The above means that municipalities are required to identify mineral aggregate resources on a map and include a policy framework that establishes what can happen on lands that contain mineral aggregate resources as well as on adjacent lands.



On July 23, 2015, the United Counties of Leeds and Grenville ('UCLG') adopted its first Official Plan. The Ministry of Municipal Affairs and Housing ('MMAH') approved the Official Plan ('Counties OP'), with modifications, on February 19, 2016.

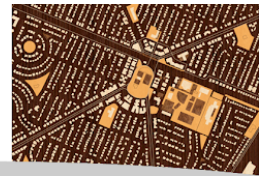
As part of the Official Plan review process a Background Report containing policy options, dated August 2014, was prepared. This Background Report included a Draft Schedule B1 – Mineral Aggregate Resource Areas, Constraints Areas and Waste Disposal Sites ('Draft Bedrock Schedule'). This Draft Bedrock Schedule included the locations of primary, secondary and tertiary sand and gravel resource areas as well as bedrock resource areas, among other layers. It is noted that at the time the Ministry of Natural Resources and Forestry ('MNRF') (now referred to as the Ministry of Northern Development, Mines, Natural Resources and Forestry ('MNDMNRF')) required that primary, secondary and tertiary sand and gravel resources be identified, given that there are only a small number of primary and secondary sand and gravel resource areas within the UCLG.

On the Draft Bedrock Schedule described above, bedrock resource areas were identified on approximately two thirds of the UCLG and it was the thinking at the time that this information was to be portrayed as an overlay in the Counties OP and not a land use

designation. A number of concerns were raised during the Counties OP Review process about the extent of bedrock resources in the UCLG and concerns over minimizing the impacts of new or expanding mineral aggregate operations. In addition to this, the UCLG was faced with a compressed timeline to complete the Counties OP Review that did not allow for a comprehensive exercise to refine the delineation of bedrock resource areas. As a result, bedrock resource areas did not end up being identified on any schedule in the adopted Counties OP.

On the basis of the above, the Counties OP was modified through the approval process to indicate that the UCLG must complete an Aggregate Resources Master Plan ('ARMP') to address specific aggregate and bedrock issues within three years of the approval of the Counties OP. In this regard, an Official Plan Amendment is required to implement the ARMP once complete.

The development of an ARMP provides the UCLG with an opportunity to protect mineral aggregates for long-term use while being proactive on what the UCLG's expectations are in terms of where extraction is potentially anticipated to occur in the future and under what conditions. In addition, an opportunity exists for the UCLG to take the lead on policy approaches to minimize social, economic and environmental impacts that



reflect UCLG objectives. In this regard, the Counties established a number of objectives for the ARMP and these included:

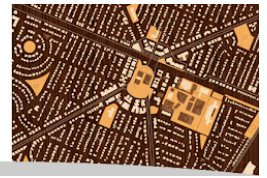
- Use existing data and mapping to review mineral aggregate resources, including bedrock resources, in the UCLG;
- Examine and identify viable mineral aggregate resource deposits for protection and extraction examining environmental, social and economic factors
- Identify and discuss potential constraints to extraction of mineral aggregate resources;
- Refine the identified mapping of mineral aggregate resources in areas of potential conflict and potential non-viable deposits, if needed; and,
- Review and update existing Counties OP policies for mineral aggregate resources, including bedrock resources, using current best practices. This review may also result in criteria that should be considered when an application is submitted.

The intent of the ARMP is to provide more certainty for the industry and the public when making property investment decisions, reduce conflict and the time and resources required to process individual applications.

There is also an opportunity to re-enforce a number of key policies in the Counties OP that have worked well for managing resource extraction. In addition to this is the opportunity to incorporate new policies that strike a balance between competing environmental, social and economic interests in order to ensure a high quality of life for current and future generations.

On the basis of the above, the purpose of this Aggregate Resources Master Plan is to provide:

- An overview of the applicable policies in the Planning Act, PPS and the current Counties OP framework;
- An overview of the Provincial Aggregate Resource Inventory Paper 183 that establishes the extent of sand and gravel and bedrock resources within the UCLG;
- An overview of the policy framework in the local Official Plans as it relates to mineral aggregate designation(s) and select relevant policies;
- A description of the proposed sand and gravel and bedrock mapping; and,
- A number of policy recommendations for the Counties OP that apply to sand and gravel and bedrock resource areas.



## 2. LEGISLATIVE AND POLICY CONTEXT

### 2.1 Planning Act

The Planning Act establishes the basic framework for making land use planning decisions in Ontario. Section 1.1 of the Planning Act states that the purposes of the Act are:

- a) *To promote sustainable economic development in a healthy natural environment within the policy and by the means provided under this Act*
- b) *To provide for a land use planning system led by provincial policy*
- c) *To integrate matters of provincial interest in provincial municipal planning decisions*
- d) *To provide for planning processes that are fair by making them open, accessible, timely and efficient*
- e) *To encourage co-operation and co-ordination among various interests*
- f) *To recognize the decision-making authority and accountability of municipal councils in planning.*

Sub-section (a) above is intended to support sustainable economic development while providing for a healthy natural environment.

Sub-section (b) above clearly articulates the Provincial requirement that the 'land use planning system' in Ontario be 'led by Provincial policy'.

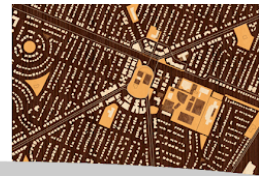
Subsection (c) builds upon sub-section (b) by indicating that matters of Provincial interest should be integrated into Provincial and municipal planning decisions.

Sub-section (d) provides for an open planning process while sub-section (e) encourages co-operation among various interests. This includes the Province, the UCLG, the local municipalities, landowners, industry and the broader public.

Lastly, sub-section (f) recognizes the decision-making authority and accountability of municipal councils in making planning decisions.

Section 2 of the Planning Act sets out the responsibilities of the Council of a municipality and the OLT. Sub-section (c) identifies mineral aggregates as a matter of Provincial interest, as follows:

*The Minister, the council of a municipality, a local board, a planning board and the Tribunal, in carrying out their responsibilities under this Act, shall have regard to, among other matters, matters of provincial interest such as:*



*(c) The conservation and management of natural resources and the mineral resource base;*

Section 3(5)(a) of the Planning Act states the following:

*A decision of the council of a municipality, a local board, a planning board, a minister of the Crown and a ministry, board, commission or agency of the government, including the Tribunal, in respect of the exercise of any authority that affects a planning matter, shall be consistent with the policy statements issued under subsection (1) that are in effect on the date of the decision.*

On the basis of the above, land use planning decisions are required to be consistent with the PPS.

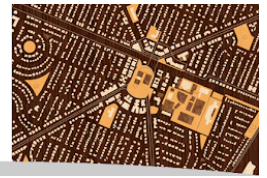
## **2.2 Provincial Policy Statement**

The current PPS came into effect on May 1, 2020. The PPS provides policy direction to municipalities on matters of Provincial interest related to land use planning and development. Part IV of the PPS establishes the vision for Ontario's land use planning system and it clearly indicates that one of the keys to the long-term prosperity and social well-being of Ontario is a strong economy. Of particular relevance to the ARMP is the following section:

*The Province's natural heritage resources, water resources, including the Great Lakes, agricultural resources, mineral resources, and 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 fibre, minimize environmental and social impacts, provide for recreational opportunities and meet its long-term needs.*

In this regard, there is an overall public interest in ensuring that sources of aggregate such as sand and gravel and bedrock are as close to market as possible to ensure costs are low and that there is competition in the marketplace. Given that it is the public that generally pays for infrastructure through taxation from one level of government or another, there is a clear public interest in ensuring that the cost to the general public of infrastructure is kept low when feasible and practical.

Section 2.5 of the PPS includes policies that address mineral aggregate and petroleum resources. Section 2.5.1 requires the long-term protection of mineral aggregate resources and it reads as follows:



*2.5.1 Mineral aggregate resources shall be protected for long-term use and, where provincial information is available deposits of mineral aggregate resources shall be identified.*

As noted previously, the PPS defines deposits of mineral aggregate resources as follows:

*Deposits of mineral aggregate resources: means an area of identified mineral resources, as delineated in Aggregate Resource Inventory Papers or comprehensive studies prepared using evaluation procedures established by the Province for surficial and bedrock resources, as amended from time to time, that has a sufficient quantity and quality to warrant present or future extraction.*

On the basis of the above, the mapping contained within Aggregate Resource Inventory Paper 183 ('ARIP 183') identifies a number of Selected Bedrock Resource Areas and Select Sand and Gravel Resource Areas within the UCLG. In this regard, the above means that following the completion of the ARMP, the Counties OP will need to be amended to include a map of resources as shown in the ARIP 183.

There are two PPS policies in particular that have a significant impact on aggregate policy development and the review of applications

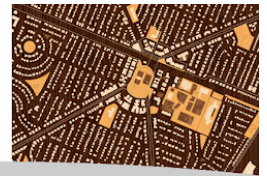
since they require decision makers to consider how the Provincial interest in the "conservation and management of natural resources and the mineral resource base (Sec. 2 of the Planning Act)" will be balanced against other matters of Provincial interest that relate to the protection of ecological systems, the orderly development of safe and healthy communities and the appropriate location of growth and development, among others. These two policies are Sections 2.5.2.1 and 2.5.2.2, both of which are reproduced below:

*Section 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.*

*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.*

*Section 2.5.2.2 - Extraction shall be undertaken in a manner which minimizes social, economic and environmental impacts.*

Section 2.5.2.1 recognizes that mineral aggregate resources are an integral component of the economy and that the transportation of this resource to market is



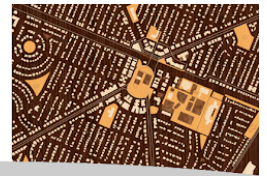
cost sensitive. There is no definition of “realistically possible” in the PPS.

The use of word 'shall' in the context of this policy makes it clear that planning authorities must take this direction into account when making planning decisions. The second component of the policy makes it clear that the demonstration of need for mineral aggregate resources is not a factor in the development of resource strategies or in the consideration of individual applications, regardless of the municipality or location.

Section 2.5.2.2 of the PPS then acts as the 'control' over where new resource uses are to be located and is intended to ensure that the policy in Section 2.5.2.1 is balanced against the expressed desire to minimize impacts. In this regard, Section 2.5.2.2 provides the basis for the establishment of criteria to identify potential resource areas and to assess applications to establish resource uses. It is noted that the word 'shall' is also used in this section. This section also uses the word “minimize” with no definition of “*minimize*” provided in the PPS. As a result, the determination of whether extraction minimizes social, economic and environmental impacts is the most important consideration in making a decision on an application to establish a new resource use. It is also noted that the use of the word ‘minimize’ assumes and recognizes that some impacts will occur.

There are a number of other policies in the PPS that are directly or indirectly supportive of the mineral aggregate industry and the extraction of mineral aggregate resources, recognizing the important role that it plays in our economy and in the availability and efficient delivery of needed services and infrastructure. However, there are other policies that indicate that development and land use patterns which may cause environmental or public health and safety concerns should be avoided and that uses such as resource extraction activities and sensitive land uses are appropriately designed, buffered and/or separated from each other to prevent adverse effects.

The challenge in developing a policy framework relating to aggregates is determining how to apply the many polices in the PPS that potentially apply. For example, Section 2.1.4 indicates that development and site alteration shall not be permitted in certain natural heritage features. Section 2.2.2 indicates that development and site alteration shall be restricted in or near sensitive surface water features and sensitive ground water features such that these features and their related hydrologic functions *“will be protected, improved or restored.”* Section 2.5.2.1 of the PPS then indicates that, as much of the mineral aggregate resources as is realistically possible shall be made available as close to markets as possible. It is then noted in Part



III of the PPS indicates that the PPS shall be read in its entirety and all relevant policies are to be applied to each situation. The use of the word 'shall' in each of these policies indicates that the policy is 'mandatory'.

All of the 'shalls' mentioned above will need to be balanced in developing an updated policy framework.

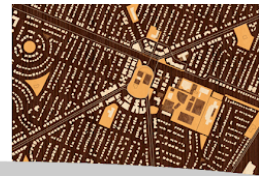
As noted earlier, one of the main purposes of the ARMP is to identify Selected Bedrock Resources on a map. During the preparation of the current Counties OP, there had been a number of concerns raised about the extent of land in this category and its impact on potential future development. This is because once the Selected Bedrock Resource Areas are identified in an Official Plan, Section 2.5.2.5 of the PPS is triggered. Section 2.5.2.5 of the PPS reads as follows:

*In known deposits of mineral aggregate resources and on adjacent lands, development and activities which would preclude or hinder the establishment of new operations or access to the resources shall only be permitted if: a) resource use would not be feasible; or b) the proposed land use or development serves a greater long-term public interest; and c) issues of public health, public safety and environmental impact are addressed.*

As set out in Section 2.5.2.5 of the PPS, an assessment of the impacts of proposed development on the feasibility of resource extraction is required to be carried out whenever development is proposed with development being defined as development requiring a Planning Act approval. It is noted that items a) and b) in Section 2.5.2.5 are separated by the word "or".

This means that it could be considered that a proposed land use or development serves a greater long-term public interest than a proposed resource use even if it is determined that resource use would be feasible. This means that the potential exists as part of the review of any planning application to make a determination on what use is in the greater long-term public interest. In addition to the above, it is noted that one of the tests is: *"The resource use would not be feasible"*. In this regard, the presence of a resource is not in of itself a determinant of whether it is feasible to extract. There are a number of factors that need to be considered to determine feasibility and these will need to be considered in the policy framework of the future Counties OP Amendment.

The Province has not provided municipalities with a formal Terms of Reference for preparing the required assessment by Section 2.5.2.5 of the PPS. However, the Province has prepared a draft terms of



reference for an aggregate study with the focus being on severances. This draft document is a locally developed consolidation of direction that draws upon the Ministry of Natural Resources Non-Renewable Training Manual (1997) and aggregate study components that have been used in the past.

The draft document clarifies when a development application triggers the completion of a study or studies and sets out the information required to assess the impact of a proposed development application. In this regard, the following types of information could be requested to assist a planning authority in determining the impact of a development application:

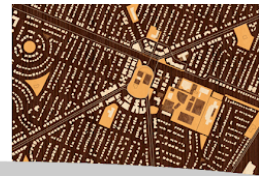
- Introduction (includes policy rationale, scope of work, site description, existing aggregate use analysis);
- Topography and drainage;
- Geological setting;
- Aggregate resource mapping;
- Site inspection results;
- MOE well record data review;
- Compatibility analysis;
- Constraint assessment;
- Mitigation studies; and,
- A number of figures such as general location plan, topography and drainage plan, aerial photography plan, physiography map, surficial

geology map, aggregate resource area, site photographs, map of MOE well locations.

The above information is intended to provide the planning authority with the necessary information to make one of the following four decisions:

1. Determine that the development will not have any negative impact on the aggregate resource;
2. Determine that the development will have negative impact on the aggregate resource that can be overcome by appropriate modifications to the design or construction phases and/or the adoption of appropriate mitigation techniques;
3. Determine that the development will result in negative impacts to extraction that cannot be overcome by planning, design or construction changes; or
4. Determine there is still insufficient information to determine negative impacts.

While the provision of an official Terms of Reference by the Province would be helpful, it could only be construed as being generic at best since the nature of each development proposal in relation to the nature of the resource is potentially unique each time.



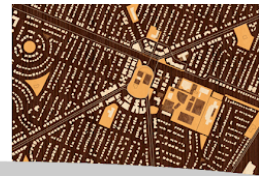
This is because in addition to the nature of the development proposal, the arrangement, location and nature of other land uses in the area are all site-specific considerations. With respect to the bedrock resource itself, the nature of the resource is also potentially different each time with factors such as the quality of the resource, the type of the resource, limitations on the extraction of the resource for environmental or access reasons all being conceivably different each time as well.

As noted above, Section 2.5.2.5 of the PPS is triggered when 'development' as defined by the PPS and 'activities' (which is not defined) are proposed. Given that 'development' means a change in land use requiring a Planning Act approval, this section is triggered by an application to amend the Official Plan or zoning by-law, and by an application for Plan of Subdivision/Condominium, consent or minor variance. It is not triggered when the only approval required is for a building permit pursuant to the Ontario Building Code to build a new home on a vacant lot.

On the basis of the above, applications to construct a dwelling or any other use on any property that is zoned to permit the use would not trigger Section 2.5.2.5 of the PPS since a Planning Act approval is not required. In addition, any application for development

as per the Planning Act within the boundary of a settlement area would not trigger the application of Section 2.5.2.5 of the PPS.

Given the above, the future Official Plan Amendment should include policies that aim to minimize the impact of Section 2.5.2.5 on future Planning Act approvals in the Agricultural Area and Rural Lands designations. Consideration should also be given to the types of development that should be exempt from completing an assessment as required by Section 2.5.2.5 of the PPS.



### 3. OVERVIEW OF ARIP 183

The purpose of this section of the ARMP is to review the nature and location of mineral aggregates in the UCLG. It is noted that this section discusses information that is sourced primarily by the Ontario Geological Survey ('OGS') of the MNMNMRF.

The OGS is responsible for the Aggregate Resources Inventory Program ('ARIP'), the purpose of which is to provide the basic geological information required to include potential mineral aggregate resource areas in land-use planning strategies and decision-making processes. According to the MNMNMRF website, the OGS has existed for over 125 years.

In 2009, the OGS released ARIP 183 that includes an inventory and evaluation of sand and gravel and bedrock resources in the UCLG. It is noted in the ARIP 183 that overall production had remained close to 2 million tonnes per year between 1996 and 2005. According to The Ontario Aggregate Resources Corporation (TOARC), the 2020 Production Statistics Report indicates that production rates in the UCLG have been around 2 million tonnes per year between 2010 and 2020. The following table provides a summary of aggregate production in the UCLG between 2010 and 2020.

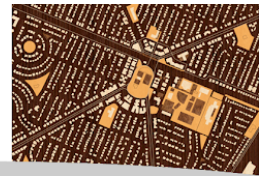
Year	Tonnage (million tonnes)
2010	2.6
2011	2.0
2012	2.2
2013	1.9
2014	2.2
2015	1.9
2016	2.0
2017	2.2
2018	2.1
2019	2.1
2020	2.0

The ARIP 183 also indicates that population and aggregate production trends over the last decade have been relatively stable and that this suggests that similar production rates may be expected for the foreseeable future. This suggestion from the ARIP 183 appears to be correct based on the production rates published in the TOARC production statistic reports.

With respect to the quantity of aggregate within the UCLG, ARIP 183 also noted that:

*Reserves of sand and gravel are in very short supply within the county and it will be necessary to use crushed bedrock to meet the demand for most aggregate products.*

With respect to the location of mineral aggregate deposits, the ARIP 183 indicates the following:



*Although mineral aggregate deposits are plentiful in Ontario, they are fixed-location, non-renewable resources that can be exploited only in those areas where they occur. Mineral aggregates are characterized by their high bulk and low unit value so that the economic value of a deposit is a function of its proximity to a market area as well as its quality and size. The potential for extractive development is usually greatest in areas where land use competition is extreme. For these reasons the availability of adequate resources for future development is now being threatened in many areas, especially urban areas where demand is the greatest.*

The ARIP 183 then indicates that:

*The report is a technical background document based on the most part on geological information and interpretation. It has been designed as a component of the total planning process and should be used in conjunction with other planning considerations, to ensure the best use of an area's resources.*

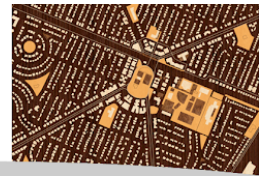
The ARIP 183 identifies selected resource areas in the UCLG that represent areas in which a major resource is known to exist. Below is an overview of the Selected Sand and Gravel Resource Areas and the Selected Bedrock Resource Areas as detailed in the ARIP 183.

### 3.1 Selected Sand and Gravel Resource Areas

At the time that the ARIP 183 was prepared, there were 83 licensed sand and gravel pits operating in the UCLG. According to the MNDMNRF Pits and Quarries Online database ([ontario.ca/page/find-pits-and-quarries](http://ontario.ca/page/find-pits-and-quarries)), there are currently 74 pits in operation that comprise a licensed area of 1,629.21 hectares.

In the UCLG, the ARIP 183 identifies eight Selected Sand and Gravel Resource Areas at the primary significance level, which occupy a total area of 799 hectares. The ARIP 183 indicates that once licensed resources are removed and cultural, environmental and other land use constraints are considered, there are an estimated 707 hectares that remain for possible resource extraction. The ARIP 183 indicates that this land area is estimated to include approximately 106.3 million tonnes of sand and gravel. The ARIP 183 does not indicate the area of land that is included as secondary and tertiary resource areas.

As discussed further in **Section 7.1** of this ARMP, the proposed sand and gravel resource mapping is based on the mapping included in the ARIP 183 as well as additional land area that has been identified as resource area from annual updates that have been completed by the MNDMNRF.



The proposed sand and gravel resource area mapping includes area calculations based on data from the MNDMNRF. In this regard, there is 1,266 hectares of primary sand and gravel resource, 1,664 hectares of secondary sand and gravel resource and 48,497 hectares of tertiary and gravel resource. It is noted that these area calculations do not take into account the pre-emptive constraints as discussed in **Section 7.1** of this ARMP.

Map 1 in the ARIP 183 provides an inventory and evaluation of Selected Sand and Gravel Resource Areas in the UCLG. The ARIP 183 indicates the following with respect to this map:

*Each area of primary significance is coloured red on Map 1 and identified by a deposit number that corresponds to numbers in Table 3. ... Selected Sand and Gravel Resource Areas of primary significance are not permanent, single land units. They represent areas in which a major resource is known to exist and may be reserved wholly or partially for extractive development and/or resource protection. In many of the recently approved municipal Official Plans, all or portions of resources of primary significance, and in some cases resources of secondary significance, are identified and protected.*

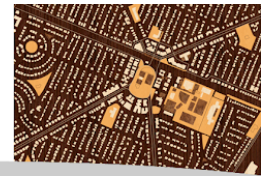
*Deposits of secondary significance are coloured orange on Map 1. Such deposits are believed to contain significant amounts of sand and gravel. Although deposits of secondary significance are not considered to be the “best” resources in the report area, they may contain large quantities of sand and gravel and should be considered as part of the overall aggregate supply of the area.*

*Deposits of tertiary significance are coloured yellow on Map 1. They are not considered to be important resource areas because of their low available resources or because of possible difficulties in extraction. Such areas may be useful for local needs or extraction under a wayside permit, but are unlikely to support large-scale development.*

**Map 1: Sand and Gravel Resources for the United Counties of Leeds-Grenville**, as shown in the ARIP 183, is included at the end of this section of the ARMP.

### **3.2 Selected Bedrock Resource Areas**

At the time that the ARIP 183 was prepared, there were 37 licensed quarries that comprise an area of 1,390 hectares. According to the MNDMNRF Pits and Quarries Online database ([ontario.ca/page/find-pits-and-quarries](http://ontario.ca/page/find-pits-and-quarries)), there are currently 28 aggregate quarries in



operation that comprise a licensed area of 917.81 hectares.

It was further noted in the ARIP 183 that the majority of the quarries were producing bedrock-derived crushed stone for use in the road building and construction industries. The Selected Bedrock Resource Areas identified in the ARIP 183 are those that are covered by less than 8 metres of overburden, which is a depth that is generally assumed to be the maximum amount of overburden that can be removed while still producing viable product. These areas occupy a possible resource area of 179,156 hectares in the UCLG and have a possible aggregate resource of 71,188 million tonnes.

As discussed further in **Section 7.1** of this ARMP, the proposed bedrock resource area mapping is based on the mapping included in the ARIP 183 as well as additional land area that has been identified as resource area from annual updates that have been completed by the MNDMNRF. In this regard, the proposed bedrock mapping includes area calculations based on data from the MNDMNRF and there is approximately 176,103 hectares of bedrock resource area within the UCLG. It is noted that this area calculation does not take into account the pre-emptive constraints as discussed in **Section 7.1** of this ARMP.

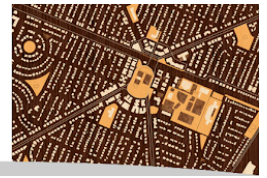
The ARIP 183 identifies 7 Selected Bedrock Resources Areas and these areas are

restricted to a single level of significance (unlike the Selected Sand and Gravel Resource Areas). The ARIP 183 provides the following reasoning for this difference as follows:

*First, the quality and quantity variations within a specific geological formation are gradual. Second, the areal extent of a given quarry operation is much smaller than that of a sand and gravel pit producing an equivalent tonnage of material, and third since crushed bedrock has a higher unit value than sand and gravel, longer haul distances can be considered.*

The ARIP 183 states the following with respect to the type of geology that exists within the UCLG:

*The study area is underlain by Precambrian rocks, the Cambro–Ordovician Potsdam Group, and the Ordovician March, Oxford and Gull River formations. The central and eastern portion of the study area is part of the Ottawa–St. Lawrence Lowlands, a large basin lying between the Canadian Shield to the north and west and the Adirondack Mountains to the south. The western boundary of this basin is the Frontenac Axis, which trends southeast through the Thousand Islands area and underlies the western part of the county. The eastern extent of the basin is at the Beauharnois*



*Anticline near the junction of the Ottawa and St. Lawrence rivers.*

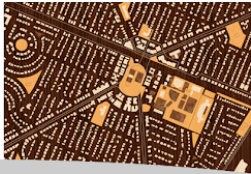
Map 2 in the ARIP 183 identifies Bedrock Resource Areas and it shows the distribution of bedrock formations and thicknesses of overlying unconsolidated sediments. The ARIP 183 indicates the following with respect to this map:

*The darkest shade of blue indicates where bedrock crops out or is within 1 m of ground surface. These areas constitute potential resource areas because of their easy access. The medium shade of blue indicates areas where drift cover is up to 8 m thick. Quarrying is possible in this depth of overburden and these zones also represent potential resource areas. The lightest shade*

*of blue indicates bedrock areas overlain by 8 to 15 m of overburden.*

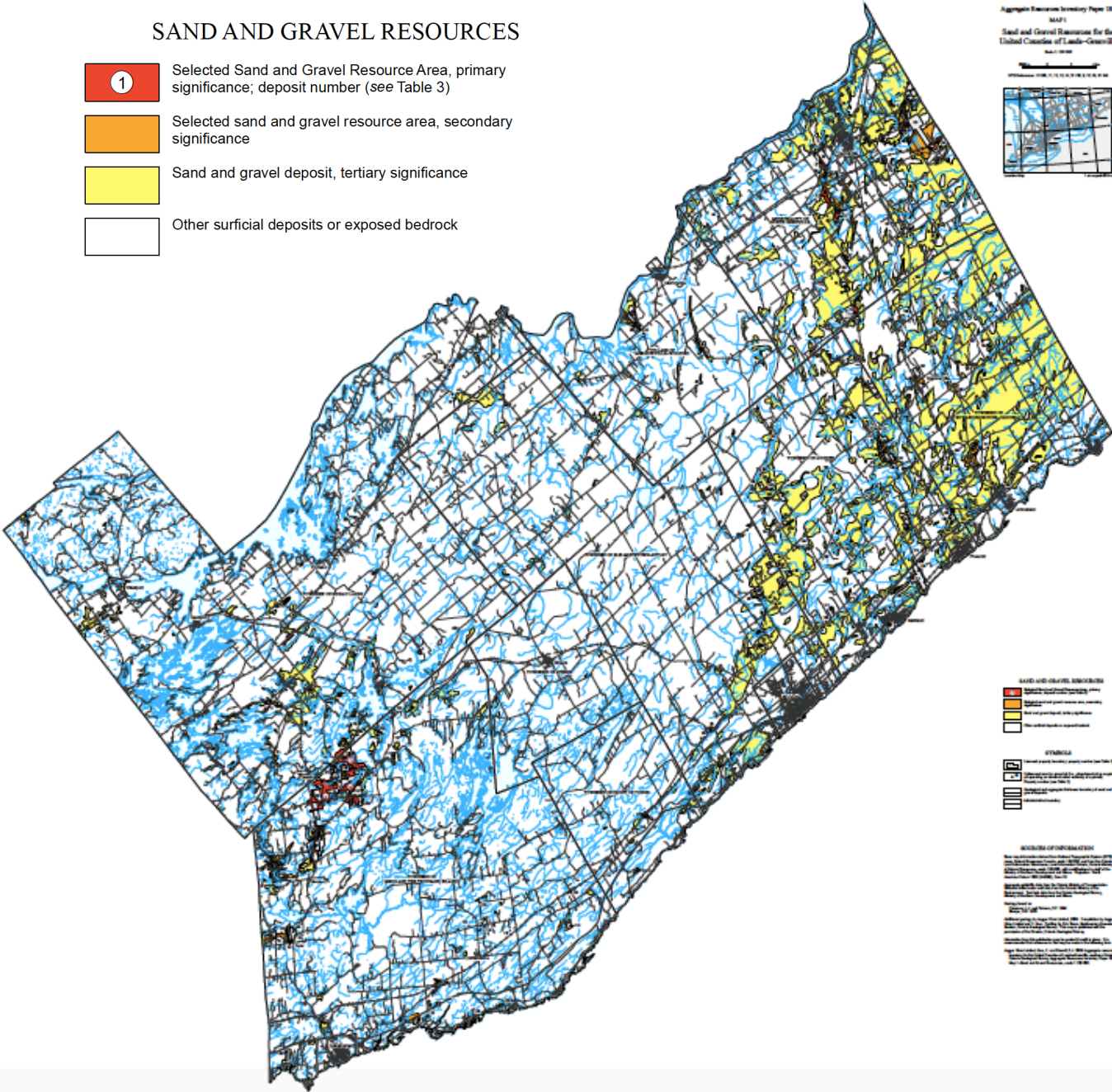
**Map 2: Bedrock Resources for the United Counties of Leeds-Grenville**, from the ARIP 183, is included at the end of this section of the ARMP.

In addition to the above, the ARIP 183 further notes that: *Selected Bedrock Resource Areas shown on Map 2 are not permanent, single land use units. They represent areas in which a major bedrock resource is known to exist and may be reserved wholly or partially for extractive development and/or protection, within an Official Plan.*



**SAND AND GRAVEL RESOURCES**

- 1 Selected Sand and Gravel Resource Area, primary significance; deposit number (see Table 3)
- Selected sand and gravel resource area, secondary significance
- Sand and gravel deposit, tertiary significance
- Other surficial deposits or exposed bedrock



Aggregate Resource Inventory Paper 003  
 MAP 1  
 Sand and Gravel Resources for the  
 United Counties of Leeds-Grenville  
 July 1, 2008

**SAND AND GRAVEL RESOURCES**

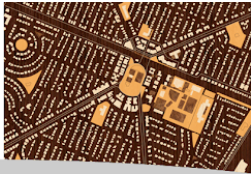
- Selected sand and gravel resource area, primary significance
- Selected sand and gravel resource area, secondary significance
- Sand and gravel deposit, tertiary significance
- Other surficial deposits or exposed bedrock

**SYMBOLS**





- 1 Selected Sand and Gravel Resource Area, primary significance
- 2 Selected Sand and Gravel Resource Area, secondary significance
- 3 Sand and Gravel Deposit, tertiary significance
- 4 Other surficial deposits or exposed bedrock

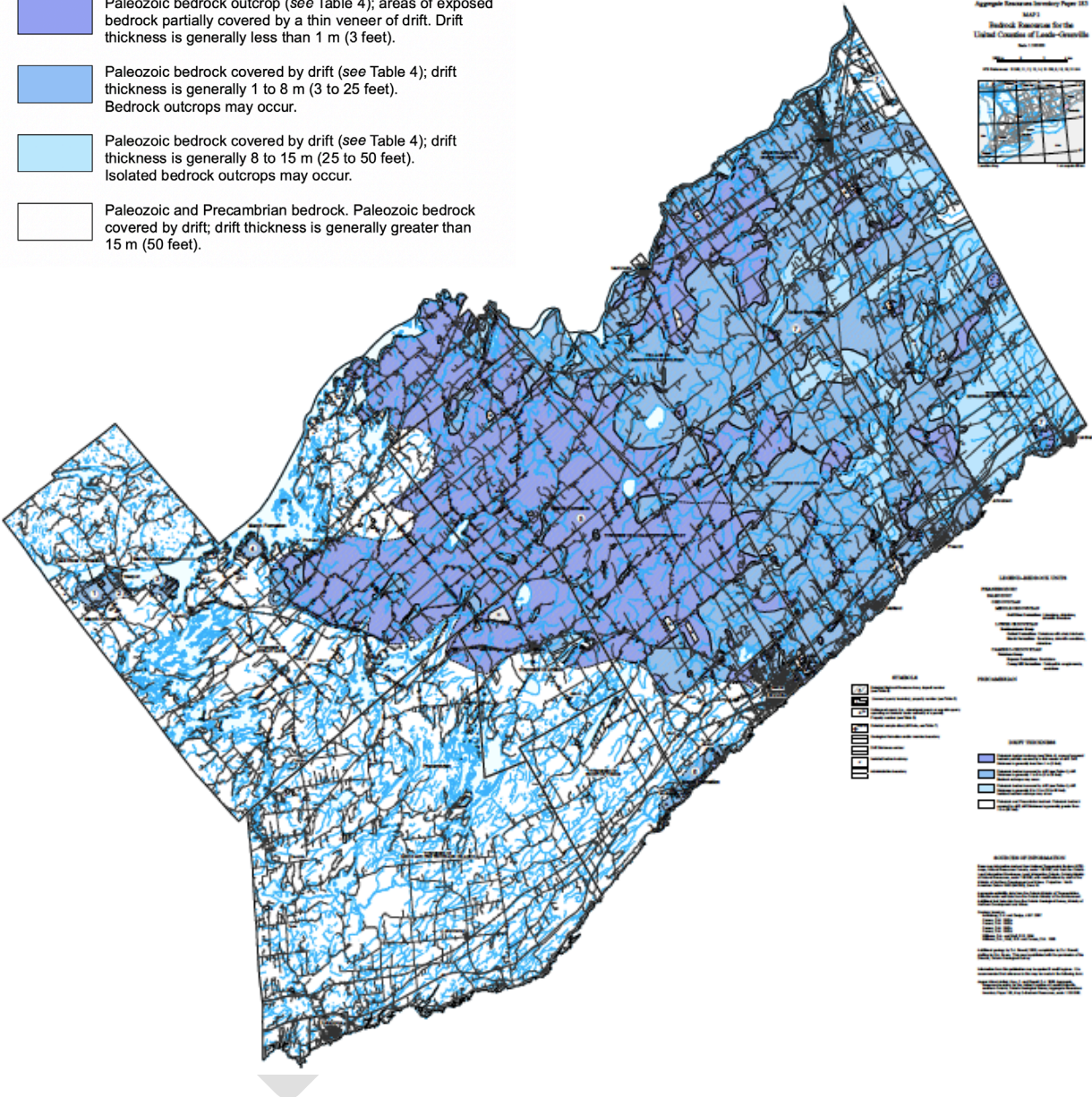
**NOTES OF INFORMATION**

This map was prepared for the purpose of identifying sand and gravel resources in the United Counties of Leeds-Grenville. It is not intended to be used for any other purpose. The map is based on data provided by the United Counties of Leeds-Grenville and is subject to change without notice. The map is not a warranty of any kind and does not constitute an offer of any product or service. The map is provided as a general guide only and should not be used for any specific purpose. The map is not a warranty of any kind and does not constitute an offer of any product or service. The map is provided as a general guide only and should not be used for any specific purpose.



**DRIFT THICKNESS**

-  Paleozoic bedrock outcrop (see Table 4); areas of exposed bedrock partially covered by a thin veneer of drift. Drift thickness is generally less than 1 m (3 feet).
-  Paleozoic bedrock covered by drift (see Table 4); drift thickness is generally 1 to 8 m (3 to 25 feet). Bedrock outcrops may occur.
-  Paleozoic bedrock covered by drift (see Table 4); drift thickness is generally 8 to 15 m (25 to 50 feet). Isolated bedrock outcrops may occur.
-  Paleozoic and Precambrian bedrock. Paleozoic bedrock covered by drift; drift thickness is generally greater than 15 m (50 feet).



Aggravate Resources Inventory Paper 153  
MAP 1  
Bedrock Knowledge for the  
United Counties of Leeds-Grenville  
Map 10000  
© 2008, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100

**LEGEND**

**ROADS**

- Major Road
- Secondary Road
- Tertiary Road
- Railway

**WATER**

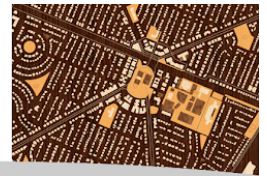
- Lake
- Stream
- Wetland

**DRIFT THICKNESS**

- Paleozoic bedrock outcrop (see Table 4); areas of exposed bedrock partially covered by a thin veneer of drift. Drift thickness is generally less than 1 m (3 feet).
- Paleozoic bedrock covered by drift (see Table 4); drift thickness is generally 1 to 8 m (3 to 25 feet). Bedrock outcrops may occur.
- Paleozoic bedrock covered by drift (see Table 4); drift thickness is generally 8 to 15 m (25 to 50 feet). Isolated bedrock outcrops may occur.
- Paleozoic and Precambrian bedrock. Paleozoic bedrock covered by drift; drift thickness is generally greater than 15 m (50 feet).

**AGGAVATE RESOURCES INVENTORY**

This map is a derivative of the Aggravate Resources Inventory (ARI) and is intended for informational purposes only. It is not intended to be used for any other purpose. The ARI is a comprehensive inventory of natural resources in the United Counties of Leeds-Grenville, Ontario, Canada. It includes information on land use, water resources, and other natural resources. The ARI is a valuable tool for land use planning and resource management. The ARI is a dynamic document that is updated regularly. The ARI is a public document and is available to the public. The ARI is a key component of the Aggravate Resources Inventory (ARI) and is an essential tool for land use planning and resource management. The ARI is a comprehensive inventory of natural resources in the United Counties of Leeds-Grenville, Ontario, Canada. It includes information on land use, water resources, and other natural resources. The ARI is a valuable tool for land use planning and resource management. The ARI is a dynamic document that is updated regularly. The ARI is a public document and is available to the public. The ARI is a key component of the Aggravate Resources Inventory (ARI) and is an essential tool for land use planning and resource management.



## 4. OVERVIEW OF THE COUNTIES OFFICIAL PLAN

The UCLG Official Plan ('Counties OP') provides policy direction on matters of County-wide significance, such as mineral aggregate resources, and it is intended to provide policy direction to the 10 local municipalities that comprise the UCLG. The purpose of this section of the ARMP is to identify and discuss the Counties OP policies that currently apply to mineral aggregate resources.

The Counties OP includes a number of strategic directions to guide planning within the UCLG. With respect to mineral aggregates, Section 1.1.5.4 of the Counties OP includes the following strategic direction:

*Protect mineral, mineral aggregates, and petroleum resources for their long-term use in a manner that is socially and environmentally responsible.*

Section 2.6 of the Counties OP includes policies that apply to economic development. It is noted within the preamble of this section that that the extraction and management of aggregate resources is an important industry in the UCLG that employs a large percentage of its working population.

In addition to this, Section 2.6 f) reads as follows:

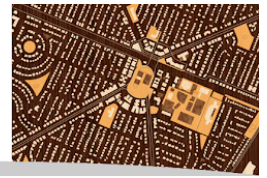
*It is a policy of the United Counties of Leeds and Grenville to:*

*f) Support the long-term protection and appropriate management of minerals, mineral aggregate resources, and petroleum resources in accordance with Section 3.5 of this Plan.*

Schedule B to the Counties OP includes a map of mineral aggregate resources within the UCLG. This map identifies primary, secondary and tertiary sand and gravel resources as identified in the ARIP 183. As noted previously in this ARMP, bedrock resources are not currently identified on a map in the Counties OP.

Schedule B from the Counties OP is shown on the next page and it identifies primary resource areas in red, secondary resource areas in yellow and tertiary resources in brown. In addition, the letter 'P' identifies pits and the letter 'Q' identifies quarries.





As shown on the previous page, primary sand and gravel resources appear to be concentrated in the northern portion of the Township of Leeds and the Thousand Islands, between Morton and Lyndhurst, as well as in North Grenville near Oxford Mills. Secondary and tertiary sand and gravel resources are generally located in the eastern portion of the UCLG, which also corresponds to the majority of pits that are currently in operation in the UCLG.

Below is a review of the existing policies within the Counties OP that address mineral aggregate resources. There are a number of policies in the Counties OP that will need to be updated following the completion of the ARMP and these have been identified below as well. **Section 8** to this ARMP includes a set of proposed Official Plan policy recommendations that provide further guidance on how the policies could be amended following the completion of the ARMP.

Section 3.5 of the Counties OP includes policies that apply to mineral, mineral aggregate and petroleum resources. Section 3.5.1 of the Counties OP includes a number of policy objectives that apply to mineral aggregates and it reads as follows:

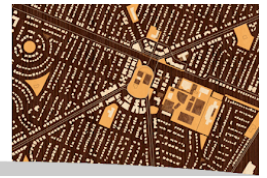
*The Counties objectives related to the management of minerals, mineral aggregate resources and petroleum resources include:*

- a) *Protect deposits of mineral aggregate resources and areas of potential mineral aggregate resources for potential future extraction.*
- b) *Recognize existing pits and quarries, and protect them from activities that would preclude or hinder their continued use or expansion.*
- c) *The development of new pits and quarries, and petroleum exploration.*
- d) *Provide a framework for mineral aggregate operations such that they are carried out in a manner that minimizes potential negative, social, economic and environmental impacts.*
- e) *Provide for the progressive rehabilitation of pits and quarries to an appropriate after use.*

On the basis of the above, the objective policies above implement the PPS and no changes to this section would be required to implement the ARMP.

Section 3.5.2 of the Counties OP includes policies that apply to mineral aggregate resources. The Counties OP includes the same definition of mineral aggregate resources as contained in the PPS (which is the same that was previously used in the 2014 PPS) and it is defined as follows:

*Mineral Aggregate Resources: means gravel, sand, clay, earth, shale, stone, limestone,*



*dolostone, sandstone, marble, granite, rock or other material prescribed under the Aggregate Resources Act suitable for construction, industrial, manufacturing and maintenance purposes but does not include metallic ores, asbestos, graphite, kyanite, mica, nepheline syenite, salt, talc, wollastonite, mine tailings or other materials present under the Mining Act. (Source: PPS, 2020)*

As noted above, this definition is the same as the one contained within the PPS and would not require any update following the completion of the ARMP.

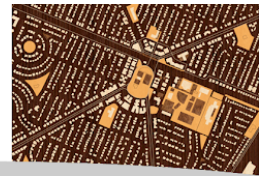
The introductory paragraph in Section 3.5.2 of the Counties OP indicates that Schedule B of the Counties OP identifies primary, secondary and tertiary sand and gravel resources to the same extent as the mapping contained in the ARIP 183. However, bedrock resources are not contained on any schedule in the Counties OP. In this regard, the introductory paragraph to Section 3.5.2 of the Counties OP also states that:

*...As the extent of the bedrock resource areas identified by the Province is expansive and covers the majority of the counties, Counties Council has directed that bedrock resource areas as depicted in the Schedules of the local municipal Official Plans will represent a detailed interpretation of the boundaries of viable bedrock resources areas until such*

*time that a Counties' Aggregate Resource Master Plan is prepared. A Counties' Aggregate Resources Master Plan will be carried out by the County in consultation with local municipalities, the Province and other agencies, and the public. Such a study shall be undertaken within 3 years of the approval of this Plan, and, subsequently the product of that review shall result in an amendment to this Plan. A Counties' Aggregate Resources Master Plan will consider all available mapping, potential constraints to resource extraction, and the associated policy framework, which may identify the criteria that should be considered when an application is submitted.*

On the basis of the above, the preamble for Section 3.5.2 indicates that extraction of viable mineral aggregate resources will be undertaken in a manner that minimizes social, economic and environmental impacts. There is also an explanation of what is considered as a deposit of mineral aggregate resource and reference to the ARIP 183.

Lastly, there is a description of the decision made by the UCLG Council to complete an Aggregate Resource Master Plan and the Counties OP further indicates that the bedrock resources as shown on maps in the local Official Plans represents the boundaries of bedrock resources until the UCLG completes its ARMP. This means that following the completion of an ARMP, the



Counties OP will need to be amended to include a map of bedrock resource areas and associated policies as well as an update the preamble to remove references to the completion of the ARMP.

Below is an overview of the remaining subsections in Section 3.5.2 of the Counties OP.

Section 3.5.2 a) of the Counties OP states:

*It is the policy of the United Counties of Leeds and Grenville that:*

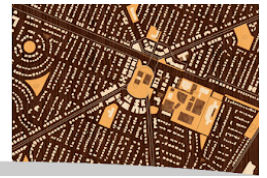
*a) In accordance with provincial policy and the policies of this Plan, viable mineral aggregate resources will be protected for long-term use. Primary, secondary and tertiary sand and gravel resource areas are identified on Schedule B. Bedrock resource areas will be identified in the local municipal Official Plans. The identification of deposits of mineral aggregate resources on Schedule B and in the local municipal Official Plans does not presume that all lands located within these areas are suitable for the establishment of new or expansions to existing mineral aggregate operations. Furthermore, the deposits of mineral aggregate resources identified on Schedule B and in the local municipal Official Plans are not intended to be reserved in totality for extraction of these resources over other potential land uses in these areas.*

As noted in Sub-section a) above, mineral aggregate resources are to be protected for long-term use. The Counties OP identifies primary, secondary and tertiary sand and gravel resource areas on a schedule, while directing local Official Plans to delineate bedrock resource areas in their respective Official Plans. This means that following the completion of the ARMP, Section 3.5.2 a) of the Counties OP will need to be updated.

Sub-section a) above also clarifies that not all areas are suitable for the establishment of extraction of mineral aggregates and are not meant to be reserved in totality for extraction. This means that other uses may be permitted on lands that are within mineral aggregate resource areas.

Section 3.5.2 b) of the Counties OP reads as follows:

*b) It is recognized that there is potential for viable deposits of mineral aggregate resources to exist outside of the areas identified on Schedule B and in the local municipal Official Plans. The extraction of viable mineral aggregate resources may be permitted outside of the potential mineral aggregate resource areas identified on Schedule B and in the local municipal Official Plans where there is a sufficient quantity and quality of viable mineral aggregate resources to warrant extraction, as determined on a case-by-case basis.*



Sub-section b) above recognizes that there may be other viable mineral aggregate resources beyond those that are identified in either the Counties OP or a local Official Plan. This means that an application, with comprehensive supporting studies, can be made on lands that are outside of identified resource areas. On the basis of the above, Section 3.5.2 b) should be retained in the Counties OP.

Section 3.5.2 c) of the Counties OP reads as follows:

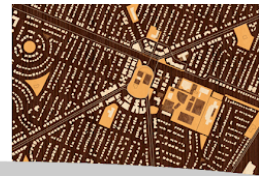
*c) The Counties will undertake the preparation of an Aggregate Resources Master Plan, in consultation with the Province, local municipalities and stakeholders, to more accurately identify and examine the extent and viability of the potential mineral aggregate resources in the Counties prior to the next review of this Plan under Section 26 of the Planning Act. The intent of the Aggregate Resources Master Plan is to identify the location of viable areas of sand and gravel and bedrock deposits that are appropriate for protection and suitable for extraction. The Aggregate Resources Master Plan will assist the Counties in refining the identification of the deposits of mineral aggregate resources as identified by the Province, and will be implemented through an amendment to the Counties Official Plan, in consultation with the local municipalities and various stakeholders.*

On the basis of the above, this ARMP is being prepared to support the future Counties OP Amendment. The ARMP and the associated Counties OP Amendment will include policies and updated mapping of Selected Sand and Gravel Resource Areas and Bedrock Resource Areas in the UCLG. This means that following the completion of the ARMP, Section 3.5.2 c) of the Counties OP will need to be updated.

Section 3.5.2 d) of the Counties OP states the following:

*d) Viable deposits of mineral aggregate resources, including primary, secondary and tertiary sand and gravel resources and bedrock resources, and mineral aggregate resources and mineral aggregate resource operations will be identified in the local municipal Official Plans, and will represent a detailed interpretation of the boundaries of viable deposits of mineral aggregate resources until such time that a Counties' Aggregate Resources Master Plan is prepared.*

Sub-section d) above requires local Official Plans to include a map that identifies sand and gravel and bedrock resources. As noted previously, bedrock resources are not currently identified on any Counties OP schedule, however most of the local Official Plans identify both sand and gravel and bedrock resource areas on a map. This is



discussed further in **Section 5** of this ARMP. On the basis of the above, this means that following the completion of the ARMP, Section 3.5.2 d) of the Counties OP will need to be updated.

Section 3.5.2 e) of the Counties OP states the following:

*e) Until such time that an Aggregate Resources Master Plan has been prepared and implemented through an amendment to the Counties Official Plan, local municipalities in their local municipal Official Plans may adjust or refine the extent of the sand and gravel resource areas identified on Schedule B and the bedrock resource areas identified by the Province, and the extent to which the policies associated with deposits of mineral aggregate resources apply within these areas, without an amendment to the Counties Official Plan. Refinements or adjustments to the extent of the sand and gravel resource areas and the bedrock resource areas may be based on the consideration of the viability of the local resources, the location of settlement areas and existing development, the location of natural heritage features and areas, and setbacks from waterbodies, among other matters, and will be subject to provincial approval.*

Sub-section e) above permits local municipalities to adjust or refine the

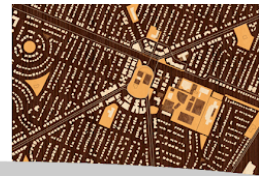
boundaries of sand and gravel and bedrock resources without requiring an amendment to the Counties OP until the ARMP is completed. However, it is noted in the above-mentioned policy that Provincial approval is required. Following the completion of the ARMP, Section 3.5.2 e) of the Counties OP will need to be updated.

Section 3.5.2 f) of the Counties OP reads as follows:

*f) Development and activities in known deposits of mineral aggregate resources and on adjacent lands, with the exception of any use in an Urban and Rural Settlement Area and/or Employment Area and agricultural uses, which would preclude or hinder the establishment of new mineral aggregate resource operations or access to the resources will only be permitted if:*

*resource use would not be feasible; or the proposed land uses or development serves a greater long-term public interest; and issues of public health, public safety and environmental impact are addressed.*

*For the purposes of this policy, 'adjacent to' will generally include lands within 300 m of sand and gravel resource areas or the licensed boundary of an existing pit, and within 500 m of bedrock resource areas or the licensed boundary of an existing quarry.*



Sub-section f) above establishes which types of development and activities are permitted on lands with a known deposit of mineral aggregate resources and on adjacent lands. In this regard, this policy does not apply to lands that are within an Urban or Rural Settlement Area, Employment Area or agricultural uses. Other types of development or uses that are not captured within the previously mentioned exemptions may be permitted if the criteria within the policy are satisfied.

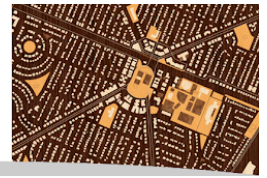
Sub-section f) above also defines 'adjacent to' as being within 300 metres of a sand and gravel resource area or the licensed boundary of an existing pit and being within 500 metres of a bedrock resource area or the licensed boundary of an existing quarry.

The influence areas described above were originally identified in the Ministry of Natural Resources Non-Renewable Training Manual (1997). Most, if not all, Official Plans in Ontario contain a provision that requires a study be completed if an alternative land use is proposed within 300 metres of a gravel pit or resource area or within 500 metres of a quarry or quarry resource area. In addition, these influence areas are the same as those established in many of the local Official Plans as discussed in **Section 5** of this ARMP. On the basis of the above, Section 3.5.2 f) should be retained in the Counties OP.

Section 3.5.2 g) of the Counties OP reads as follows:

*g) Further to policy 3.5.2 (f), until the Aggregates Resources Master Plan has been prepared and implemented through an amendment to the Counties Official Plan, local municipalities may require studies to demonstrate that proposed development and activities in the sand and gravel resource areas and bedrock resource areas and on adjacent lands will not preclude or hinder the establishment of new mineral aggregate resource operations or access to the resources. The local municipalities may waive these study requirements in the Agricultural Area, Urban and Rural Settlement Areas, Regionally Significant Employment Area, and Locally Significant Employment Area designations.*

Sub-section g) above indicates that until the ARMP is completed the local municipalities are enabled to request studies to demonstrate that proposed development and/or activities will not preclude or hinder the establishment of new mineral aggregate resource operations or access to the resources. In this regard, the local municipalities have the ability to determine if the required studies for development and/or activities within a resource area have satisfied the criteria in Section 3.5.2 f). On the basis of the above, following the



completion of the ARMP, Section 3.5.2. g) should be updated.

Section 3.5.2 h) of the Counties OP reads as follows:

*h) Mineral aggregate resource conservation will be undertaken, including through the use of accessory aggregate recycling facilities within operations, wherever feasible.*

The final sub-section h) requires operators to undertake mineral aggregate resource conservation. Section 3.5.2 h) should be retained in the Counties OP.

Section 3.5.2.1 of the Counties OP includes policies that apply to new or expanding mineral resource operations. Section 3.5.2.1 a) of the Counties OP reads as follows:

*a) New mineral aggregate resource operations or any expansion to an existing mineral aggregate resource operation that extends beyond the licensed boundary identified in the local municipal Official Plan will require an amendment to the local municipal Official Plan, and will conform to the policies of this Plan and the local municipal Official Plan. An amendment to this Plan will not be required for new or expanding mineral resource operations. The licensed boundaries of existing mineral aggregate resource operations are identified on Schedule B of this Plan, and their*

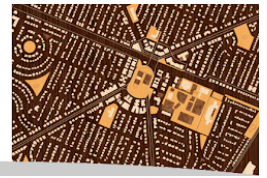
*boundaries will be identified in the local municipal Official Plans. An amendment to this Plan will not be required to identify a new mineral aggregate resource operation or changes to existing boundaries. New mineral aggregate resource operations and changes to existing boundaries will be updated at the time of the review of the Counties Official Plan under Section 26 of the Planning Act.*

Sub-section a) above establishes the requirement for a local Official Plan Amendment when a new or expanding operation extends beyond the limits of a licensed area. The policy also clarifies that an amendment to the Counties OP is not required. In this regard, Section 3.5.2.1 a) should be retained in the Counties OP.

Sub-section b) of the Counties OP reads as follows:

*b) In considering new mineral aggregate resource operations or any expansion to an existing mineral aggregate resource operation, the Counties and local municipality will be satisfied that prior to approval of a local municipal Official Plan amendment that the impacts are minimized with respect to the following:*

- i. surrounding land uses and siting of extraction operations, including demonstrating compatibility with the*



- rural character and landscape, including visual impacts;*
- ii. surrounding sensitive uses through adequate buffering, screening, and other mitigation measures;*
- iii. transportation infrastructure, particularly as it relates to County Roads and Provincial Highways;*
- iv. social and community considerations;*
- v. demonstration that the final rehabilitation plan is consistent with the policies of this Plan and the local municipal Official Plan; and*
- vi. requirements under the Aggregate Resources Act.*

Sub-section b) above identifies evaluative criteria that must be met when considering new or expanding aggregate operations and a local Official Plan Amendment. In this regard, Section 3.5.2.1 b) should be retained in the Counties OP.

Sub-section 3.5.2.1 c) of the Counties OP reads as follows:

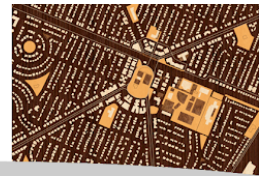
*c) The Counties' Aggregate Resources Master Plan may rely on studies prepared in response to policy 3.5.2.1 b) and take into account the potential cumulative impacts that may result from proposed new or expanding mineral aggregate resource operations when added to other past, present and known mineral aggregate*

*resource applications in the vicinity. The cumulative impact assessment will be undertaken in consultation with local municipalities, applicable Conservation Authorities, aggregate operation owners/applicants, and the public.*

Sub-section c) above indicates that the Counties' ARMP may rely on studies prepared in response to subsection b) and may consider cumulative impacts resulting from proposed new or expanding operations. Since the ARMP will be implemented through a Counties OP Amendment that includes a policy framework that addresses assessment and application requirements, Section 3.5.2.1 c) should be deleted from the Counties OP.

Section 3.5.2.1 d) of the Counties OP reads as follows:

*d) A pre-application consultation meeting with the Province, Counties, local municipality and applicable Conservation Authority will be required to ensure that any specific requirements for each of the agencies are addressed to avoid overlap among the required studies, and such that the studies can satisfy all the requirements of the identified agencies. Following the pre-application consultation meeting, the Counties and/or local municipality to the extent of its jurisdiction, may appropriately scope, waive, or establish a peer review or*



*other suitable evaluation process for any required study, at the expense of the applicant.*

Sub-section d) above requires a pre-application consultation meeting with the Province, Counties, local municipality and Conservation Authority. The purpose of this meeting is to identify required studies, scope or waive studies and identify any other peer review or evaluation process. In this regard, Section 3.5.2.1 d) should be retained in the Counties OP.

Section 3.5.2.1 e) of the Counties OP reads as follows:

*e) Where the licensee has circulated an application under the Aggregate Resources Act, to expand an existing licensed mineral aggregate operation or increase the depth of extraction which does not require the approval of a development application, the Counties and local municipality may review and provide comments on the application to the Province in the context of all policies in this Plan that would apply to an application for a new or expanding mineral aggregate operation.*

Sub-section e) above enables the Counties to provide comments on an application made under the Aggregate Resources Act if the application does not require the approval of a development application. In this regard,

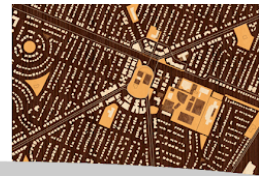
Section 3.5.2.1 e) should be retained in the Counties OP.

Section 3.5.2.1 f) of the Counties OP reads as follows:

*f) The Counties will encourage the Province to ensure that all appropriate requirements resulting from the review of an application for a new or expanding mineral aggregate operation are imposed and enforced as conditions on the license or through the site plan required under the Aggregate Resources Act, particularly as it relates to the matters identified in Section 3.5.2.1 b).*

Sub-section f) above indicates that the Counties will encourage the Province to impose conditions on the license or site plan required under the Aggregate Resources Act with respect to implementing Section 3.5.2.1 b) of the Counties OP. In this regard, Section 3.5.2.1 f) of the Counties OP should be retained in the Counties OP.

In addition to the above, Section 3.5.2.2 of the Counties OP includes a number of policies that address rehabilitation of mineral aggregate resource operations. In this regard, the policies require rehabilitation of operations after the extraction has occurred and other related activities have ceased.



Section 3.5.2.2 a) of the Counties OP reads as follows:

*a) Progressive and final rehabilitation will be required to accommodate subsequent land uses, to promote land use compatibility, to recognize the interim nature of extraction, and to minimize impacts, to the extent possible. Final rehabilitation will take into consideration the pre-extraction land use designation and conditions, and compatibility with the character of the surrounding land uses and approved land use designations, in consideration of the Counties Plan and local municipal Official Plan, as well as the opportunity to accommodate parks and open space uses.*

Sub-section a) above requires progressive and final rehabilitation for aggregate operations. In this regard, Section 3.5.2.2 a) should be retained in the Counties OP.

Section 3.5.2.2 b) of the Counties OP reads as follows:

*b) Comprehensive and coordinated rehabilitation planning is encouraged where there is a concentration of mineral aggregate operations.*

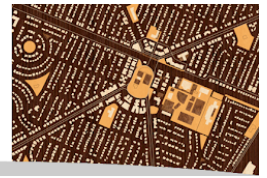
Sub-section b) above encourages comprehensive and coordinated rehabilitation where there is a concentration

of operations. In this regard, Section 3.5.2.2 b) should be retained in the Counties OP.

Section 3.5.2.2 c) of the Counties OP reads as follows:

*c) In prime agricultural areas, on prime agricultural land the extraction of mineral aggregate resources is permitted as an interim use provided the site will be rehabilitated back to an agricultural condition. Complete rehabilitation back to an agricultural condition is not required if:*

- i. there is a substantial quantity of mineral aggregate resources below the water table warranting extraction, or the depth of planned extraction in a quarry makes restoration of pre-extraction agricultural capability unfeasible;*
- ii. other mineral aggregate resource extraction alternatives have been considered by the proponent and found unsuitable. The consideration of other mineral aggregate resource extraction alternatives will include mineral aggregate resources in areas of Canada Land Inventory Class 4 through 7 lands, resources on lands identified as settlement areas, and, resources on prime agricultural lands where rehabilitation is feasible. Where no other alternatives are found, prime agricultural lands will*



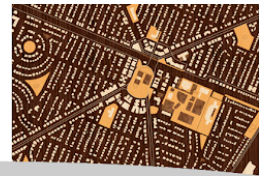
- be protected in this order of priority:  
Canada Land Inventory Class 1, 2 and  
3 lands; and*
- iii. agricultural rehabilitation in  
remaining areas is maximized.*

Sub-section c) above permits the extraction of mineral aggregate resources (as an interim use) on prime agricultural land in prime agricultural areas, provided that the site is rehabilitated back to an agricultural condition. In this regard, Section 3.5.2.2 c) should be retained in the Counties OP.

Section 3.5.2.2 d) of the Counties OP reads as follows:

*d) Local municipal Official Plans may establish policies for the removal of accessory buildings, structures and uses after the mineral aggregate operation ceases.*

Sub-section d) above enables local municipalities to include policies in their respective Official Plans that address mineral aggregate operations. In this regard, Section 3.5.2.2 d) should be retained in the Counties OP.



## 5. REVIEW OF LOCAL OFFICIAL PLANS

The purpose of this section of the ARMP is to provide an overview of the local Official Plans that include a policy framework that addresses mineral aggregate resources as well as provide initial guidance on the types of policies that may need to be amended in their Official Plans following the completion of the ARMP and Counties OP Amendment process.

There are 10 local municipalities that comprise the UCLG and these are:

- Township of Athens;
- Township of Augusta;
- Township of Edwardsburgh/Cardinal;
- Township of Elizabethtown-Kitley;
- Township of Front of Yonge;
- Township of Leeds and the Thousand Islands;
- Village of Merrickville-Wolford;
- Municipality of North Grenville;
- Township of Rideau Lakes; and,
- Village of Westport.

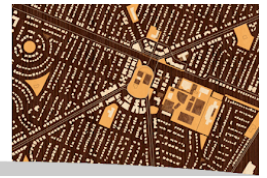
In addition to the above and as indicated in the Counties OP, the City of Brockville, Town of Gananoque and Town of Prescott are separated municipalities that are geographically part of the UCLG, but not administratively part of the UCLG. The

Official Plans for these separated municipalities do not include a map, designation or specific policies that address mineral aggregate resources and for these reasons are not discussed further in this section of the ARMP.

The following subsections include an overview of each of the local Official Plans that address mineral aggregate resources. It is not the intent of the subsections to provide a detailed review of all mineral aggregate policies, however each subsection identifies:

- The mineral aggregate resource designation(s) that applies;
- The map(s) that shows the location of the mineral aggregate resource designation(s);
- The uses permitted on lands within the mineral aggregate resource designation(s); and,
- Other policies that address circumstances that require an Official Plan Amendment, alternative uses in resource areas as well as influence areas.

On the basis of the above, the following sections provide an overview of the local Official Plans.



## 5.1 Township of Athens

On June 7, 2010, the Council for the Township of Athens adopted its Official Plan ('Athens OP') and it came into effect on July 17, 2012 following approval by the Ontario Municipal Board (now the Ontario Land Tribunal). The Township is currently undertaking an OP Review and has prepared a first draft for consultation with the Counties, dated June 2020.

The current Athens OP includes a Mineral Resource designation and the intent of this designation is to recognize licensed pits and quarries as well as lands containing deposits of mineral aggregates or minerals. This designation includes two subcategories referred to as '- Aggregate' and '- Mineral', however it is noted in Section 3.2.1 of the Athens OP that at the time of adoption there were no lands designated Mineral Resource – Mineral.

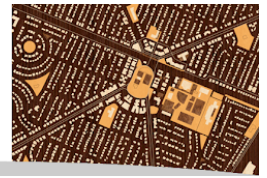
The Athens OP indicates that the *Township is virtually devoid of natural granular material ... and that at the eastern end of Charleston Lake, deposits are small and of poor quality rendering them most suitable for fill material only.* In this regard, the only surficial mineral aggregate deposits designated as Mineral Resource – Aggregate are found in the northwest portion of the Township. Schedule A to the Athens OP is included at the end of this subsection and it shows the

Mineral Resource – Aggregate designation (with black dots).

In addition to the above, Schedule B: Constraints and Opportunities to the Athens OP identifies potential bedrock sources of mineral aggregate. Schedule B also identifies significant woodlands, significant wildlife habitat, significant valleylands, natural corridors and organic soils. There are six areas identified as potential bedrock sources of mineral aggregate (in red outline) on Schedule B that overlap with the aforementioned constraints. Schedule B from the Athens OP is shown at the end of this subsection.

Section 3.2.1 of the Athens OP includes policies that apply to mineral resources and indicates the following with respect to bedrock resources:

*Mapped bedrock information has been provided to the Township through the Ministry of Natural Resources. The March Formation that is found in the north and east portions of the Township is considered to be the only probable bedrock source of aggregate that has potential to be quarried to serve local aggregate needs. From the mapping supplied, the Township has identified the areas of the municipality where there are potential sources of mineral aggregate that could be exploited, after having given regard to environmental*



*constraints imposed by the presence of locally- and Provincially-significant wetlands as well as the presence of land use constraints imposed by existing development.*

On the basis of the above, the mapped bedrock resources within the Athens OP were subject to an exercise that considered environmental and other land use constraints. In this regard, the mapped bedrock resources in the Athens OP are considerably less than what is contained within the ARIP 183.

Section 3.2.2 of the Athens OP permits a range of aggregate-related uses as follows:

*The aggregate-related uses permitted include pits and quarries, as well as all associated facilities used in extraction, transport, beneficiation, processing or recycling of mineral aggregate, or the production of secondary related products. These uses include extractive operations, crushing facilities, stockpiles, washing and screening operations, asphalt plants, concrete plants and aggregate transfer stations, as well as accessory uses to extractive operations including asphalt plants, concrete batch plants, recycle stockpile areas for glass, asphalt and concrete and aggregate transfer stations.*

In addition to the above, mineral-related uses such as open pit and underground

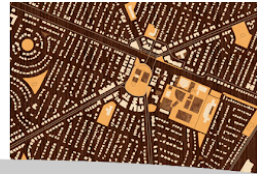
mining operations and associated facilities are also permitted. Land uses such as agriculture, forestry, conservation and outdoor recreation uses are also permitted provided such land uses do not generally include buildings or activities that would preclude or hinder the establishment of new mining or mineral aggregate operations or access to mineral resources.

Section 3.2.3 of the Athens OP includes policies that apply to mineral resources. In this regard, Section 3.2.3.1 requires an Official Plan Amendment for a new resource operation if located outside of the Mineral Resource – Aggregate designation or if there is a significant expansion proposal that involves lands beyond the limits of the designated area.

Section 3.8.5 of the Athens OP also permits extraction in the Prime Agricultural Area as an interim use, provided that rehabilitation of the site is carried out so that substantially the same areas and same average soil quality for agriculture are restored.

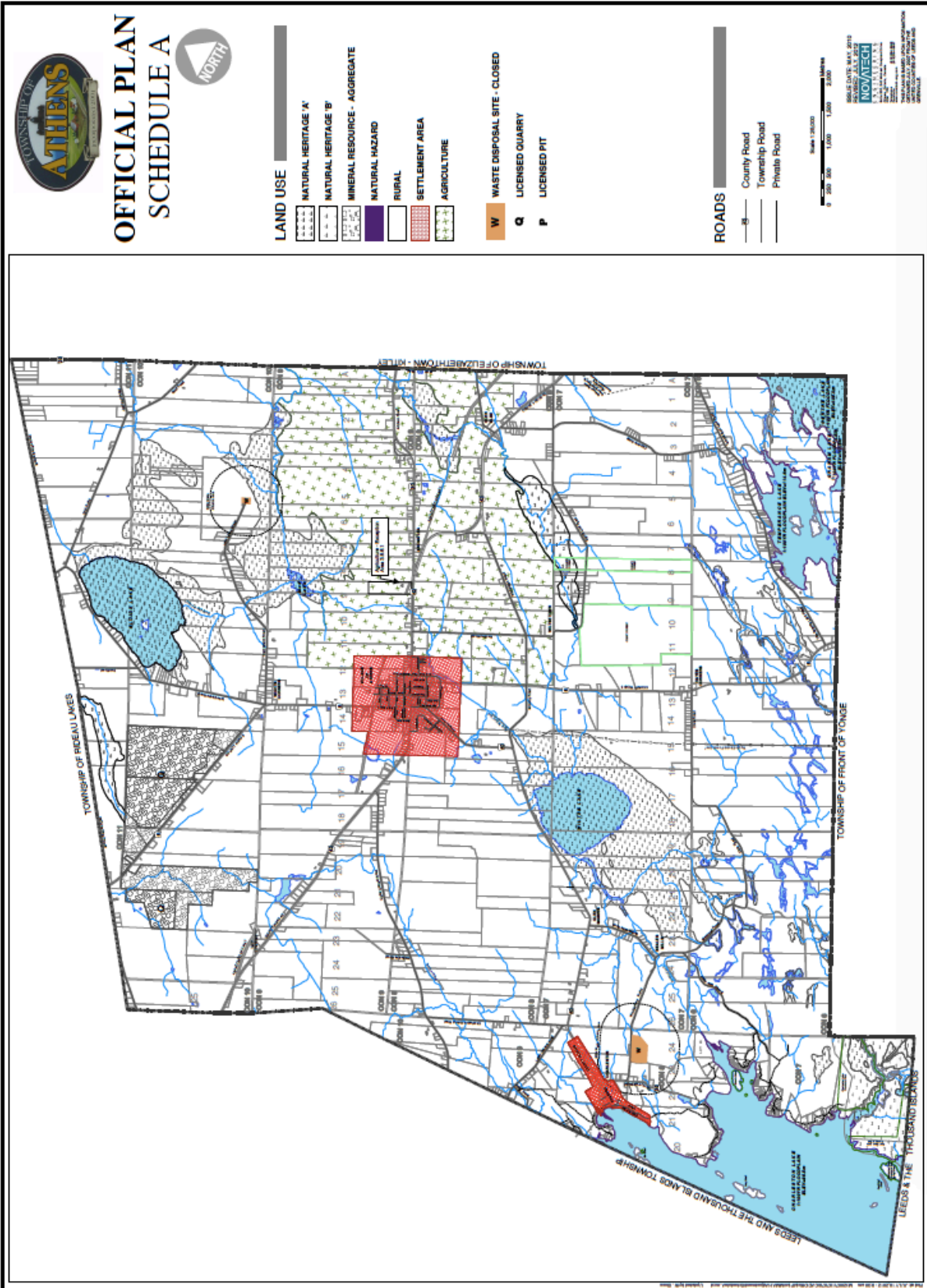
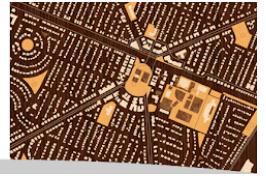
In addition to the above, Section 3.2.3.10 of the Athens OP establishes influence areas in relation to pits and quarries near sensitive uses and it reads as follows:

*It is a policy of this Plan that existing sensitive land uses such as residences, day care centres and educational and health facilities*

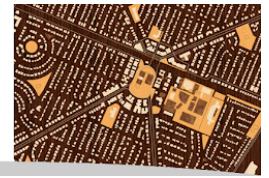


*shall be protected from the establishment of new mineral aggregate and mining operations or expansions where such establishment or expansion would be incompatible for reasons of public health, public safety or environmental impact. Similarly, established pits and quarries and resource areas are the beneficiaries of reciprocal policies contained in the Land Use Compatibility section of this Plan intended to protect them from encroachment by sensitive land uses. Influence areas in relation to pits are 300 metres, except in the case of Class B pits where excavation is above the water table, in which case the influence area is 150 metres. The influence area in relation to quarries is 500 metres.*

On the basis of the above, an influence area for a pit is 300 metres, unless the pit is a Class B pit with excavation above the water table then the influence area is 150 metres. The influence area for a quarry is 500 metres.







## 5.2 Township of Augusta

The Township of Augusta Official Plan ('Augusta OP') came into effect on May 25, 2012. The Augusta OP includes a Mineral Aggregate Resource Policy Area designation that is identified on Schedule A – Land Use, Infrastructure and Natural Heritage Features. Lands within this designation represent those that are licensed as a pit or quarry or both under the Aggregate Resources Act.

In addition to the above, the Augusta OP identifies Bedrock Resource areas on Schedule B – Development Constraints Map. It is noted that sand and gravel resources are not identified on any schedule in the Augusta OP, despite being identified in the more recent Counties OP and the ARIP 183 mapping. Schedule B also identifies significant woodland, floodplain limit, significant wildlife habitat, Areas of Natural or Scientific Interest (ANSI), organic soil and publicly owned land. Schedule B from the Augusta OP is shown on the next page and it identifies Bedrock Resource with black, hatched lines.

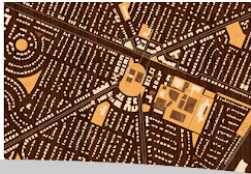
On the basis of the above, it appears that the mapped Bedrock Resource areas on Schedule B have been subjected to a scoping exercise as there is considerably less area identified as bedrock resource in the Augusta OP compared to the ARIP 183.

Section 5.2.1 of the Augusta OP establishes the permitted uses for the Mineral Aggregate Resource Policy Area designation. In this regard, the following uses are permitted: pits and quarries, wayside pits and quarries, portable asphalt plants and concrete plants, agricultural uses excluding accessory buildings or structures, conservation and natural resource management uses excluding any accessory buildings or structures, other aggregate accessory uses and permanent asphalt and concrete plants.

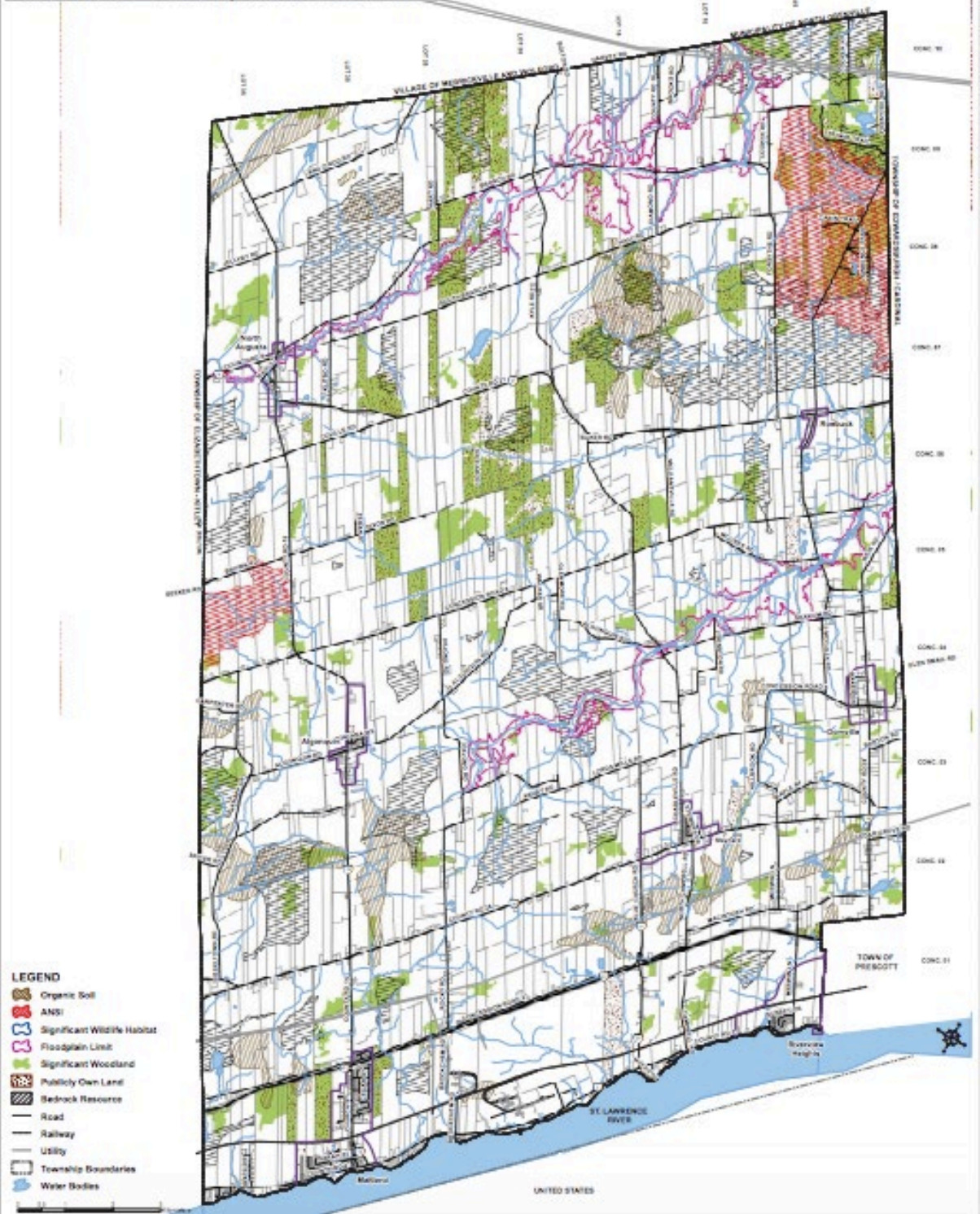
Section 5.2.2 of the Augusta OP sets out prohibited uses within the Mineral Aggregate Resource Policy Area designation and it reads as follows:

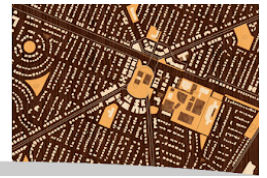
*Development, including changes in land use and the creation of new lots for residential, commercial, institutional, recreational or industrial development which has the potential to preclude or hinder future aggregate extraction or the expansion of existing extraction operations or resource use shall be prohibited within the Mineral Aggregate Resource Policy Area.*

Section 5.2.3 of the Augusta OP permits the establishment of a new or enlarged existing operation to occur if the operation is entirely within an area that is designated as Mineral Aggregate Resource Policy Area.



**Schedule B - Development Constraints**





A new operation on any lands that are not designated Mineral Aggregate Resource Policy Area requires an amendment to the Official Plan.

Section 5.2.4 of the Augusta OP includes policies that apply to areas identified as Bedrock Resource. Section 5.2.4.1 states that areas of potential bedrock resources are identified as Bedrock Resource on Schedule B as a constraint overlay. Section 5.2.4.2 requires an amendment to the Official Plan to establish a mineral aggregate operation on lands within these areas.

In addition to the above, Section 5.2.5 of the Augusta OP establishes other policies that apply to lands within areas identified as Bedrock Resource as well as those that are considered to be adjacent lands. In this regard, Section 5.2.5.1 reads as follows:

*In areas located within 300 metres of a Mineral Aggregate Resource Policy Area intended or utilized for a licensed pit operation and 500 metres from a Mineral Aggregate Resource Policy Area intended or utilized for a licensed quarry operation, incompatible development, including the creation of new lots shall only be permitted subject to the following criteria:*

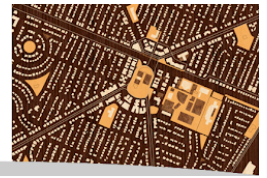
The criteria referenced in Section 5.2.5.1 is identified in Sections 5.2.5.2 and 5.2.5.3 below:

*Hydrogeological investigations conducted by a qualified professional conclusively demonstrate that the proposed non extraction development can be adequately serviced by water and sewer services in a manner which will not impede continued existing and proposed extraction operations.*

*Any other investigation as required by the development approval authority such as traffic studies, noise studies, vibration studies, slope stability studies, air quality impact studies and land use compatibility studies, etc. are carried out and demonstrate that the proposed development can proceed without impeding the continued operation of the licensed extraction operation existing licensed operations and future operations on reserves. Such studies are to be carried out by qualified professionals.*

On the basis of the above, the influence area for a pit is 300 metres and the influence area for a quarry is 500 metres. AS noted above, Section 5.2.5.2 and 5.2.5.3 of the Augusta OP set out the required studies to support development within the established influence areas.

Section 5.2.6 of the Augusta OP permits mineral aggregate resource extraction within the Prime Agricultural Area as an interim use provided that rehabilitation of the site is carried out substantially in the



same area and the same average soil quality for agriculture is restored.

Section 5.2.7 of the Augusta OP restricts mineral aggregate resource extraction from occurring within significant woodlands, unless it can be demonstrated through an Environmental Impact Statement and Land Use Compatibility Study that an aggregate extraction operation is justified. In this regard, the cutting of woodlands to facilitate extraction is permitted provided that there is minimal woodland loss and that the extraction area is progressively rehabilitated to woodland use during and following aggregate removal.

### 5.3 Township of Edwardsburgh Cardinal

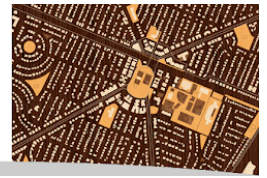
The Township of Edwardsburgh Cardinal Official Plan ('Edwardsburgh Cardinal OP') came into effect in November 2019. The Edwardsburgh Cardinal OP includes a Mineral Aggregate Resource Policy Area designation on Schedule A: Land Use and Transportation Map. This designation applies to pits and quarries that have been licensed under the Aggregate Resources Act as well as known areas of mineral aggregate resources.

In addition to the above, the Edwardsburgh-Cardinal OP identifies Bedrock Resource and Sand and Gravel Resource on Schedule B – Development Constraints Map. Schedule B also identifies significant woodlands, significant wildlife, ANSI, flood plain, organic soil, abandoned mines, waste disposals (open and closed), extreme wildland fire potential, high wildland fire potential, intake protection zones and wellhead protection zones. Schedule B from the Edwardsburgh Cardinal OP is shown on the next page, where areas of Sand and Gravel Resource are shown as orange, hatched lines and areas of Bedrock Resource are shown as red, hatched lines.

Section 3.6 of the Edwardsburgh Cardinal OP includes policies that apply to the Mineral Aggregate Resource Policy Area designation. In the introductory paragraphs of Section 3.6, it is indicated that:

*The Township contains considerable areas of surficial sand and gravel resource, as well as areas of bedrock resource. On the basis of the Aggregate Resources Inventory of the United Counties of Leeds & Grenville, Southern Ontario, Paper 183 (2009), surficial deposits that are categorized as being of tertiary significance predominate throughout the Township, while surficial*





*deposits of secondary significance are exceedingly limited in extent. Bedrock resources are expansive throughout the Township and could play an important role in the supply of bedrock-derived aggregates where suitable resources exist and access to the resource is feasible.*

*Many of the areas of tertiary deposits are small and fragmented, and others are significantly larger and/or represent areas where deposits are concentrated. Given that the sand and gravel resources are primarily of tertiary significance and many are small and fragmented, it is recognized that not all deposits are suitable to support commercial activity for aggregate extraction. Similarly, not all bedrock resources may be suitable to support commercial activity.*

In addition to the above, it is also stated within this section that:

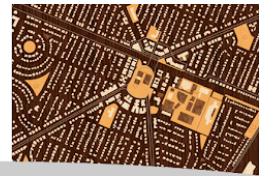
*Areas of potential surficial and gravel resources and areas of potential bedrock resources are identified as mineral aggregate reserves on Schedule B. In certain cases, these resources have been excluded from Schedule B due to contextual considerations such as proximity to provincially significant wetlands and/or incompatible land uses such as settlement areas and other built up areas.*

The policy above indicates that a scoping exercise was undertaken to delineate both the sand and gravel and bedrock resources within the Township, however it is not clear what buffers were applied in the refinement process.

In addition to the above, the final introductory paragraph recognizes that an amendment may be required to implement the UCLG ARMP once it is completed and that this may include designating additional lands on Schedule A as Mineral Aggregate Resource Area, refining the extent of mineral aggregate reserves identified on Schedule B and the inclusion of additional mineral aggregate policies.

Section 3.6.2.1 of the Edwardsburgh Cardinal OP establishes the permitted uses for the Mineral Aggregate Resource Policy Area designation and these include:

- Pits and quarries;
- Wayside pits and quarries;
- Portable asphalt plants and concrete plants;
- Agricultural uses, excluding any accessory building or structure;
- Conservation and natural resource management uses, excluding any accessory building or structure;
- Uses accessory to an aggregate extraction operation, such as crushing and screening operations,



machinery storage facilities and office space; and,

- Permanent asphalt and concrete plants, subject to a zoning by-law amendment.

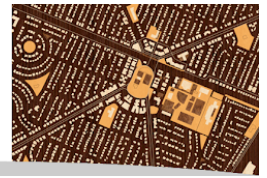
In addition to the above, Section 3.5.3.3 permits extraction within the Agricultural Resource Policy Area designation as an interim use provided that the site will be rehabilitated back to an agricultural condition.

Section 3.6.3 of the Edwardsburgh Cardinal OP includes policies that apply to lands within the Mineral Resource Policy Area designation. The establishment of new licensed operations or the enlargement of an existing licensed operation is permitted by the Official Plan provided that the new area or enlargement area is located entirely within the designated area. This section of the Official Plan also includes a list of the types of studies that are required to support new or expanded operations beyond the Mineral Resource Policy Area designation. It is noted, however, that Section 3.6.3.8 requires an Official Plan Amendment for the establishment of a mineral aggregate operation within lands identified as Mineral Aggregate Reserve on Schedule B. Lands within the Mineral Aggregate Reserve include Bedrock Resource and Sand and Gravel Resource areas.

In addition to the above, Section 3.6.3.9 of the Edwardsburgh Cardinal OP establishes the influence area for pits and quarries and it reads as follows:

*It is a policy of this Plan that existing sensitive land uses such as residences, day care centres and educational and health facilities shall be protected from the establishment of new mineral aggregate operations or expansions where such establishment or expansion would be incompatible for reasons of public health, public safety or environmental impact. Similarly, established pits and quarries and resource areas are the beneficiaries of reciprocal policies contained in the Land Use Compatibility section of this Plan intended to protect them from encroachment by sensitive land uses. Influence areas in relation to pits are 300 metres, except in the case of Class B pits where excavation is above the water table, in which case the influence area is 150 metres. The influence area in relation to quarries is 500 metres.*

On the basis of the above, the influence area for a pit is 300 metres, unless the pit is a Class B pit with excavation above the water table then the influence area is 150 metres. The influence area for a quarry is 500 metres.



## 5.4 Township of Elizabethtown-Kitley

On July 16, 2018, the Council for the Township of Elizabethtown-Kitley adopted its Official Plan ('Elizabethtown-Kitley OP') and it was approved by the UCLG on October 25, 2018. The Elizabethtown-Kitley OP includes a Mineral Resource designation and it is identified on Schedule A1 – Land Use and Roads, Schedule A2 – Land Use and Roads North and Schedule A3 – Land Use and Roads South. The intent of the Mineral Resource designation is to recognize existing resources as well as pits and quarries. The Mineral Resource designation includes two subcategories ' – Mineral' and '– Mineral Aggregate'.

Section 3.3.1 of the Elizabethtown-Kitley OP indicates that the surficial sand and gravel deposits in the Township are of tertiary significance. There are no deposits of primary or secondary significance within the Township. It is noted in the introductory paragraphs that:

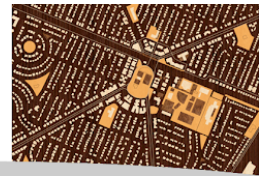
*In certain cases, areas of surficial tertiary deposits have been excluded from the Mineral Resource designation due to contextual considerations such as proximity to natural heritage features such as wetlands, ANSIs, existing incompatible land uses or the shorelines or water bodies.*

*It is anticipated that an Official Plan amendment will be necessary to identify both surficial and bedrock sources of aggregate in the Township upon completion of the Counties' Aggregate Resource Master Plan.*

On the basis of the above, the policy above indicates that a scoping exercise was undertaken to delineate the sand and gravel resources within the Township, however it is not clear what buffers were applied in the refinement process.

The Elizabethtown-Kitley OP recognizes that bedrock resources are not shown on any schedule in the Official Plan. It is further noted within the introductory paragraphs of Section 3.3.1 that as surficial aggregate resources are exhausted, bedrock resources may become of interest and that amendment to the Official Plan will be required to establish an operation within a bedrock resource area. It is further recognized that the Elizabethtown-Kitley OP will need to be amended to identify both surficial and bedrock sources of aggregate upon completion of the UCLG ARMP.

On lands within the current Mineral Resource designation, Section 3.3.2 of the Elizabethtown-Kitley OP permits aggregate-related and mineral-related uses as well as agriculture forestry, conservation and outdoor recreation uses provided that such



uses do not include buildings and would not preclude or hinder the establishment of a new mineral mining or mineral aggregate operation or access to mineral resources.

Section 3.3.3 of the Elizabethtown-Kitley OP includes policies that apply to the Mineral Resource designation. In this regard, Section 3.3.3.1 requires an amendment to the Official Plan for any expansion proposal that extends onto lands that are beyond the limits of the designated area. Additional subsections within Section 3.3.3 include policies that outline required studies and tests for alternative land uses as well as rehabilitation requirements.

In addition to the above, Section 3.3.3.12 of the Elizabethtown-Kitley OP establishes influence areas and it reads as follows:

*It is a policy of this Plan that existing sensitive land uses such as residences, day care centres and educational and health facilities shall be protected from the establishment of new mineral aggregate and mining operations or expansions where such establishment or expansion would be incompatible for reasons of public health, public safety or environmental impact. Similarly, established pits and quarries and resource areas are the beneficiaries of reciprocal policies contained in the Land Use Compatibility section of this Plan intended to protect them from encroachment by*

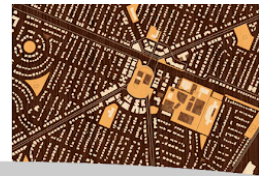
*sensitive land uses. Influence areas in relation to pits are 300 metres, except in the case of Class B pits where excavation is above the water table, in which case the influence area is 150 metres. The influence area in relation to quarries is 500 metres.*

On the basis of the above, the influence area for a pit is 300 metres, unless the pit is a Class B pit with excavation above the water table then the influence area is 150 metres. The influence area for a quarry is 500 metres.

## 5.5 Township of Front of Yonge

On January 15, 2018, the Council for the Township of Front of Yonge adopted its Official Plan ('Front of Yonge OP') and it was later approved by the UCLG on March 22, 2018. The Front of Yonge OP includes a Mineral Resource designation on Schedule A: Land Use and Roads. This designation applies to licensed pits and quarries (also shown on Schedule A) as well as lands containing deposits of mineral aggregates or minerals. Section 3.2.1 of the Front of Yonge OP indicates that lands within this designation are based on information from the Ministry of Northern Development and Mines and the Ministry of Natural Resources and Forestry.

With respect to the mapping of aggregate resources, the introductory paragraphs in Section 3.2.1 of the Front of Yonge OP indicates the following:



*In general, the Township's natural granular material is virtually depleted. Portions of the remaining surficial reserves are limited in quality and quantity, and are inaccessible due to contextual considerations such as existing incompatible land uses that would make extraction problematic. As a consequence, surficial mineral aggregate deposits, designated as Mineral Resource – Aggregate, are in limited supply throughout the Township. It is recognized, however, that due to a lack of adequate mapping, the Township's relatively significant bedrock resources of aggregate are not shown on Schedule A. Accordingly, as surficial aggregate resources within and adjacent to the Township are exhausted, bedrock sources may become of interest. In the meantime, Official Plan Amendment applications to develop these bedrock aggregate resources may, therefore, be expected. This Plan may also be amended to identify additional mineral aggregate areas upon completion of the Counties' Aggregate Resources Master Plan.*

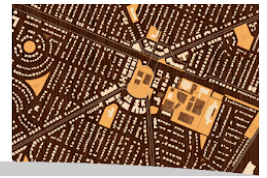
On the basis of the above, the Front of Yonge OP recognizes that there are significant bedrock resources within the Township that are not identified on a map and indicates that the Official Plan may be amended to identify bedrock resources on an Official Plan schedule following the completion of the UCLG's ARMP.

On lands designated Mineral Resource, Section 3.2.2 of the Front of Yonge OP permits aggregate-related uses such as pits and quarries and associated uses as well as agriculture, forestry, conservation and outdoor recreation provided that such uses do not include buildings and would not preclude or hinder the establishment of a new mineral mining or mineral aggregate operation or access to mineral resources.

Section 3.2.3 of the Front of Yonge OP includes policies that apply to the Mineral Resource designation. Section 3.2.3.8 requires an Official Plan Amendment for any new aggregate resource operations or any expansions to an existing mineral aggregate resource operation that extends beyond the licensed boundary that is identified within the Official Plan.

In addition to the above, Section 3.2.3.13 of the Front of Yonge OP establishes influence areas for pits and quarries and it reads as follows:

*It is a policy of this Plan that existing sensitive land uses such as residences, day care centres and educational and health facilities shall be protected from the establishment of new mineral aggregate and mining operations or expansions where such establishment or expansion would be incompatible for reasons of public health,*



*public safety or environmental impact. Similarly, established pits and quarries and resource areas are the beneficiaries of reciprocal policies contained in the Land Use Compatibility section of this Plan intended to protect them from encroachment by sensitive land uses. Influence areas in relation to pits are 300 metres, except in the case of Class B pits where excavation is above the water table, in which case the influence area is 150 metres. The influence area in relation to quarries is 500 metres.*

On the basis of the above, the influence area for a pit is 300 metres, unless the pit is a Class B pit with excavation above the water table then the influence area is 150 metres. The influence area for a quarry is 500 metres.

## **5.6 Township of Leeds and the Thousand Islands**

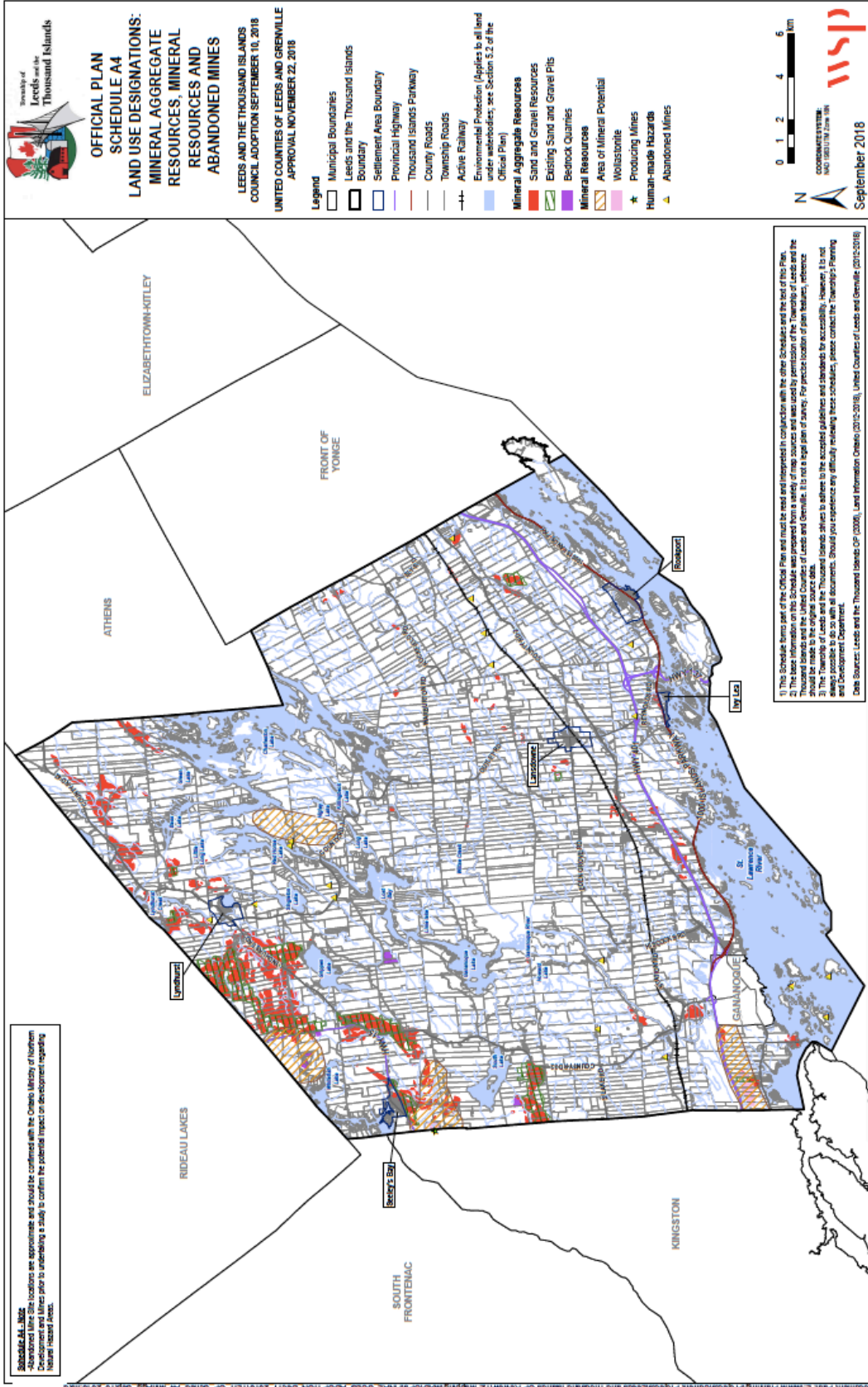
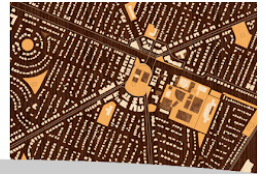
On September 10, 2018, the Council for the Township of Leeds and the Thousand Islands adopted its Official Plan ('Leeds and the Thousand Islands OP') and it was later approved by the UCLG on November 22, 2018. The Leeds and the Thousand Islands OP includes a Mineral Aggregate Resources designation on Schedule A4: Land Use Designations: Mineral Aggregate Resources, Mineral Resources and Abandoned Mines. Schedule A4 of the Leeds and the Thousand Islands OP is included on the next page and it shows sand and gravel resources in red,

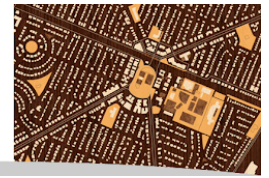
existing sand and gravel pits in green hatching and bedrock quarries in purple.

Section 5.4.1 of the Leeds and the Thousand Islands OP includes policies that apply to mineral aggregate resources. The introductory paragraphs in this section indicate that:

*The Township is characterized by a predominant pattern of Precambrian rock knobs made up of granite and other rock types interspersed with clay flats left primarily by the Glacial Lake Iroquois. The southern exposure of the Canadian Shield is present in most of the Township underlying the more recent deposits as a potential source of building and monument (dimension stone) stone. A limited amount of sand and gravel is also present, left by glacial activity.*

*The northeast corner of the Township lies outside of the Canadian Shield in the physiographic region known as the Smiths Falls Limestone Plain. This area has potential for quarrying of mineral aggregate but no detailed study of the resource has been completed, therefore no lands are designated. Proposed mineral aggregate quarries will require amendments to the Official Plan and Zoning By-law.*





On the basis of the above, it is clear in the above-mentioned policy that there may be potential for quarrying of mineral aggregate in the northeast corner of the Township, however no detailed study of the resource has been completed and there are no lands designated as mineral aggregate in this area on Schedule A4 of the Thousand Islands OP. In this regard, any proposed quarry in this area will require an Official Plan Amendment and Zoning By-law Amendment.

Section 5.4.1 of the Leeds and the Thousand Islands OP sets out the permitted uses within the Mineral Aggregate Resources designation and these include extractive operations, associated aggregate uses, agriculture, forestry, conservation or passive recreation which do not preclude or hinder current or future extraction of the resource. Existing dwellings and accessory uses may also be permitted as legal non-conforming uses and may be expanded or new accessory uses permitted where Council determines that such an expansion or accessory use does not hinder access to the resource or the continued operation of pits and quarries.

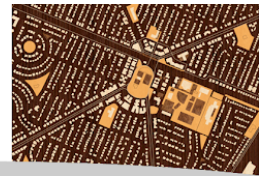
Section 5.4.1.1.1 of the Leeds and the Thousand Islands OP includes policies that apply to mineral aggregate resources as well as sand and gravel resources. It is noted within this section that Schedule A4 identifies those sand and gravel resources that are not yet sterilized as well as other

licensed areas. Interim land uses such as agriculture, forestry and outdoor recreation uses may be permitted provided that these do not include buildings or activities that would preclude the establishment of a pit. However, in areas of existing agricultural operations, buildings and structures accessory to an agricultural operation may be permitted.

In addition to the above, Section 5.4.1.1.3 of the Leeds and the Thousand Islands OP includes a policy that establishes influence areas and it reads as follows:

*The concept of an influence area is recognized as a means of protecting against incompatible land uses in the vicinity of existing and proposed pits and quarries. This influence area can be considered a study area in which studies may be completed by the proponent to demonstrate that the proposed pit or quarry is compatible with land uses within the influence area. This influence area is applied reciprocally to sensitive land uses encroaching upon existing pits and quarries.*

*The Ministry of the Environment, Conservation and Parks recommends an influence area of 500 metres for quarries, 150 metres for sand and gravel pits or reserves above the groundwater table, and 300 metres for sand and gravel pits or reserves below the groundwater table.*



*Development within this influence area may be permitted if impacts such as noise, dust, and vibration can be mitigated.*

On the basis of the above, the influence area for a pit is 300 metres, unless the pit is a Class B pit with excavation above the water table then the influence area is 150 metres. The influence area for a quarry is 500 metres. Section 5.4.1.2 of the Leeds and the Thousand Islands OP includes policies that apply to bedrock resources. In this regard, the only policy within this section reads as follows:

*The majority of the Township has bedrock resource areas. The location and extent of the bedrock resource areas shall be determined through the Counties' preparation of an Aggregate Resources Master Plan, in consultation with the Province, local municipalities including the Township, and stakeholders.*

On the basis of the above, the Leeds and the Thousand Islands OP does not recognize bedrock resources and indicates that the location and extent of bedrock resources will be identified in the UCLG ARMP.

## **5.7 Village of Merrickville-Wolford**

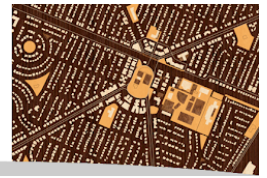
On February 10, 2020, the Council for the Village of Merrickville-Wolford adopted the

Official Plan ('Merrickville-Wolford OP'). The Merrickville-Wolford OP includes an Aggregate Resource designation on Schedule A: Land Use Plan. This designation is intended to recognize existing pits and quarries within the Village. It also identifies areas where primary, secondary and tertiary surficial deposits of sand and gravel resources are located. These deposits are found throughout the Village in a number of areas.

Section 6.3.4.1 of the Merrickville-Wolford OP also indicates that there are no bedrock resources identified on a schedule in the Official Plan. In this regard, the Official Plan recognizes that an amendment will be required to implement the UCLG ARMP once it is completed.

Section 6.3.4 of the Merrickville-Wolford OP includes policies that apply to aggregate resources and requires an amendment to the Official Plan to permit a new pit or quarry. Section 6.3.4.2 addresses permitted uses within the Aggregate Resource designation and it reads as follows:

*The permitted uses include aggregate extraction by means of pits and quarries as defined in the Aggregate Resources Act, as well as associated uses such as aggregate storage, stone crushing plants, concrete batching plants, asphalt batching plants and*



*accessory uses. Forestry, open air recreation and agriculture are also permitted uses.*

In addition to the above, Schedule A-3: Hazards and Constraints of the Merrickville-Wolford OP identifies the Aggregate Resource designation and the associated influence area. Schedule A-3 of the Village of Merrickville-Wolford OP is shown on the following page and it identifies the influence area in orange, hatched lines. It is noted that the white area within each influence area are the lands that are designated Aggregate Resource in the Merrickville-Wolford OP.

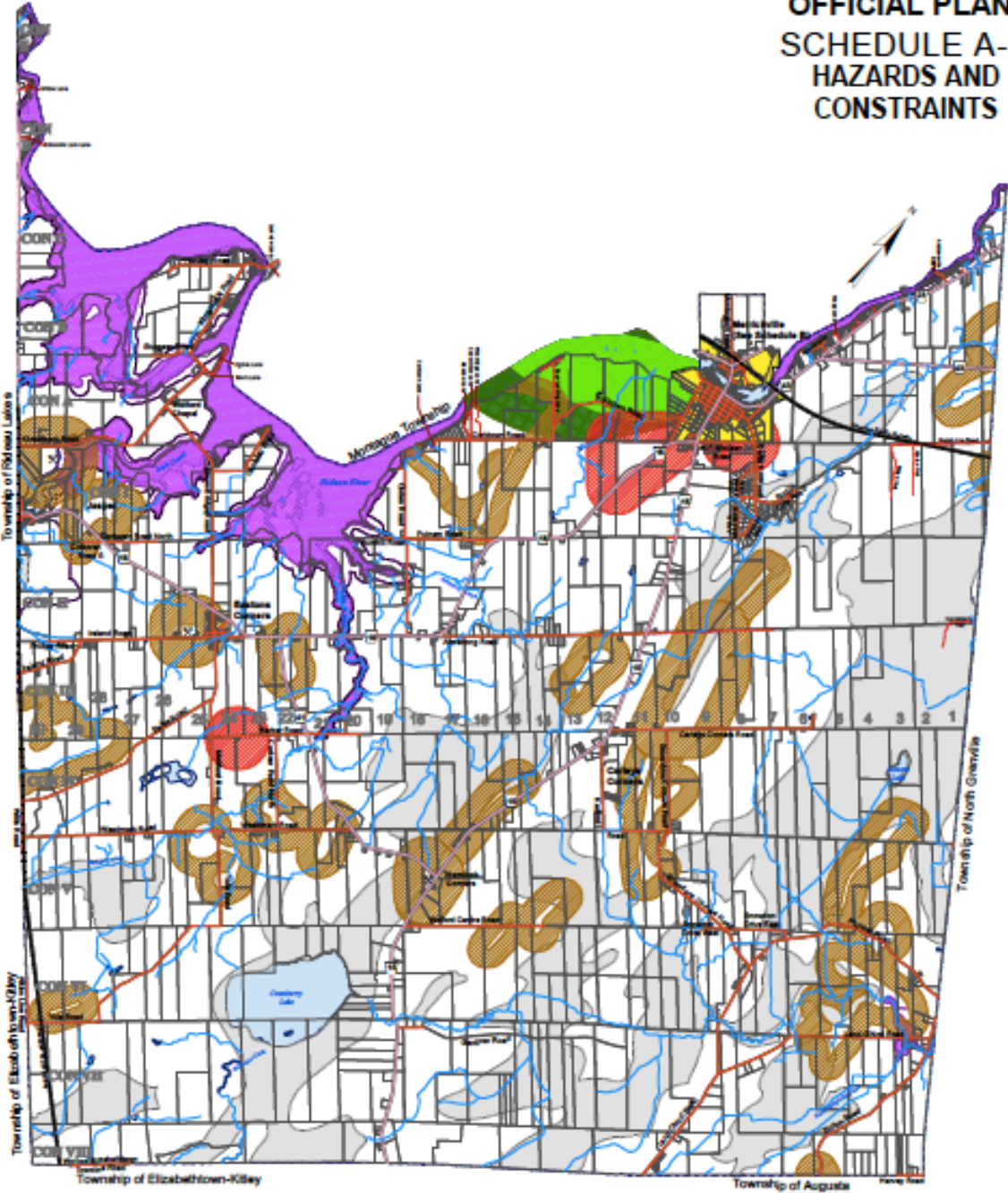
Section 5.6 of the Merrickville-Wolford OP includes policies that apply to influence areas. Section 5.6.1 indicates that Schedule A-3 and Schedule B-3 identify influence areas adjacent to certain land uses where development, particularly residential development, may be restricted or prohibited because of potential incompatibility with the adjacent designated land uses. In this regard, the influence area is 300 metres for a pit and 500 metres for a quarry.

In addition to the above, Section 5.6.2 of the Merrickville-Wolford OP establishes the type of development that is permitted within influence areas and it reads as follows:

- a) *Development may be permitted within the Influence Areas in accordance with the policies of the underlying land use designation and in accordance with any applicable policies of the adjacent land use designation to which the Influence Area applies, subject to the following additional policies.*
- b) *Residential and other sensitive land uses are generally prohibited, but may be permitted in consultation with the public agency having an interest in the Influence Area.*
- c) *Prior to approving any development within the Influence Areas, Council shall require the applicant to undertake a study in order to identify the impact of the proposed development on the adjacent designated land use, and vice versa. The study shall also identify what measures can be undertaken to mitigate the impact. Any such study shall be undertaken to the satisfaction of the Village and in accordance with the requirements of the public agency having an interest in the Influence Area.*
- d) *Where the designated land use ceases operation, either by the closing of a waste disposal site or salvage yard, or*



**OFFICIAL PLAN  
SCHEDULE A-3  
HAZARDS AND  
CONSTRAINTS**



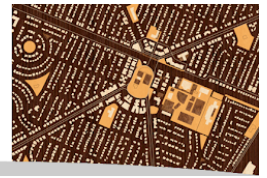
- Aggregate Resource Influence Area
- Waste Disposal Influence Area
- Flood Plain
- Fill Line
- Unstable Soils
- Wellhead Protection Area**
  - WHPA-A
  - WHPA-B
  - WHPA-C
- Abandoned Mines & Mineral Resource Operations
- County Road
- Township Road
- Private Road
- Active Railway

Note: The base information on this plan was prepared from a variety of sources and was used to the best of the Township's knowledge at the time of preparation of this Official Plan. Therefore, the Township does not warrant, and is not liable for, any errors or omissions in this plan. Users should refer to the original source data.

1:50,000

0 100 200 300 400 500

NOVATECH



*e) the surrendering of a license to operate a pit or quarry, the policies of this Section will continue to apply to the extent that the study referred to above shall be required, with necessary modifications, prior to the approval of any development.*

## 5.8 Municipality of North Grenville

On May 14, 2018, the Council for the Municipality of North Grenville adopted its Official Plan ('North Grenville OP') and it was approved by the UCLG on November 22, 2018. The North Grenville OP indicates that the North Grenville area contains extensive sand and gravel deposits that provide a valuable source of road and building construction material. The North Grenville OP includes a Mineral Aggregate designation that applies to licensed operations as well as reserves of sand, gravel and limestone. It is noted in the introductory paragraphs in Section 7 of the North Grenville OP that the lands currently designated as Mineral Aggregate are the result of a scoping exercise that was undertaken with the Ministry of Natural Resources and Forestry, which reads as follows:

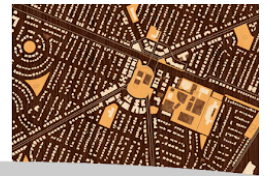
*The Municipality, in consultation with the Ministry of Natural Resources and Forestry, has undertaken a scoping exercise regarding mineral aggregate resources as part of this*

*Official Plan. However, the Municipality acknowledges that a Counties' Aggregate Resources Master Plan will be carried out by the Counties in consultation with local municipalities within 3 years of approval of the Counties' Official Plan. Furthermore, this exercise will consider available mapping, potential constraints to resource extraction, and the associated policy framework, which may identify the criteria that should be considered as part of any Aggregate Resources Master Plan.*

On the basis of the above, the policy above indicates that a scoping exercise was undertaken to delineate the sand and gravel and bedrock resources within the Township, however it is not clear what buffers were applied in the refinement process.

Schedule A to the North Grenville OP identifies the lands that are within the Mineral Aggregate designation. Section 7.1 of the North Grenville OP sets out the permitted uses for this designation which include aggregate-related uses as well as interim land uses such as agriculture, forestry and outdoor recreation provided that these uses do not include buildings or activities which would preclude the establishment of a pit or quarry.

Section 7.2 of the North Grenville OP includes policies that apply to the Mineral Aggregate designation. Subsection a)



indicates that any proposal to expand beyond the limits of the designation requires an amendment to the Official Plan. Subsections b) and c) apply to influence areas and they read as follows:

*b) The concept of an influence area is recognized as a means of protecting against incompatible land uses in the vicinity of Mineral Aggregate areas and to protect existing pits and quarries from encroachment from other incompatible land uses. In accordance with this concept, it will be the policy of the Municipality to discourage incompatible land uses in areas surrounding Mineral Aggregate areas by careful review of any severance application, rezoning application or other development proposal in consultation with the appropriate government agency. This area of influence is generally 150 metres for a pit above the water table, 300 metres for a pit below the water table and 500 metres for a quarry from the boundary of an area licensed through the Aggregate Resources Act. In these areas, development which would preclude or hinder the establishment of new operations or access to the resources will only be permitted if:*

- i. resource use would not be feasible; or*
- ii. the proposed land uses or development serves a greater long term public interest; and*

*iii. issues of public health, public safety and environmental impact are addressed.*

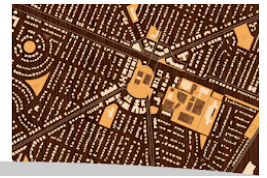
*c) For proposed development within influence areas, studies may be required by the Municipality to determine whether development would preclude or hinder the establishment of new operations or access to the resources. These studies may include noise assessments, hydrogeology reports and other similar studies.*

On the basis of the above, the influence area for a pit above the water table is 150 metres and a pit below the water table is 300 metres. The influence area for a quarry is 500 metres.

In addition to the above, Section 7.2 n) also states that bedrock resources are identified on Schedule A of the North Grenville OP. The establishment of a mineral aggregate operation on lands identified as bedrock resource requires an Official Plan Amendment and the influence area of 500 metres applies. This subsection also recognizes that the UCLG will complete an ARMP that may require amendments to the North Grenville OP to implement new and/or updated mineral aggregate resource mapping and policies.

## **5.9 Township of Rideau Lakes**

On October 20, 2003, the Council for the Township of Rideau Lakes adopted its



Official Plan ('Rideau Lakes OP') and it was approved by the MMAH, with modifications, on April 2, 2004. The Township is currently undertaking an Official Plan update according to its website. A draft Official Plan, dated February 10, 2021, is currently available for review. It is noted that the policies in the February 2021 draft Official Plan for mineral aggregate resources have been enhanced to include policies that apply to minerals and other policy language that implements the current PPS.

The Rideau Lakes OP includes a map of each Township ward and each includes the Mineral Resource designation. Section 3.3 of the Rideau Lakes OP indicates that the designation reflects the extent of resources and existing operations and is based on information provided by the MNRF and the MNM. It is further noted that:

*In certain cases, areas having mineral aggregate or mineral potential have been excluded from the Mineral Resource designation due to contextual considerations such as proximity to natural heritage features such as wetlands and ANSIs, existing incompatible land uses or the shorelines of water bodies.*

On the basis of the above, the policy above indicates that a scoping exercise was undertaken to delineate the sand and gravel and bedrock resources within the Township,

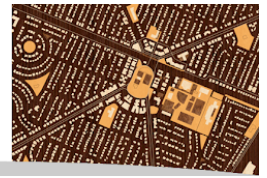
however it is not clear what buffers were applied in the refinement process.

Section 3.3.2 of the Rideau Lakes OP permits a number of uses in the Mineral Resource designation such as aggregate-related uses, mineral-related uses, agriculture, forestry, conservation and outdoor recreation as long as such uses do not generally include buildings or activities that would preclude or hinder the establishment of new aggregate operations.

In addition to the above, Section 3.3.3 of the Rideau Lakes OP includes policies that apply to lands within the Mineral Resource designation. In this regard, Section 3.3.3.2 indicates that new operations, as well as expansions to existing operations will be established through an amendment to the Zoning By-law and also may require other studies to support the proposal.

Section 3.3.3.3 of the Rideau Lakes OP establishes influence areas and it reads as follows:

*Lands within the Mineral Resource designation that are not zoned for mineral aggregate or mineral mining operations shall be placed in an appropriate zone category in the Zoning By-law which will allow rurally-oriented uses, but which will not allow sensitive land uses such as residences, day care centres and educational and health*



*facilities within the influence area of existing mineral aggregate and mining operations. Influence areas in relation to pits are 150 or 300 metres, depending upon the licence classification of the pit, as well as whether the pit excavation extends above or below the water table. The influence area in relation to quarries is 500 metres.*

On the basis of the above, the influence area for a pit depends on the license classification but it is either 150 metres or 300 metres. The influence area for a quarry is 500 metres.

### **5.10 Village of Westport**

The Council for the Village of Westport adopted its Official Plan ('Westport OP') in March 2006 and it was approved, with modifications, by the MMAH on October 31, 2006. While there are no mineral aggregates within the boundaries of the Village, there is a quarry on lands adjacent to the Village. In this regard, the Westport OP includes a policy in Section 3.15 that applies to lands that are adjacent to the western boundary of the Village and reads as follows:

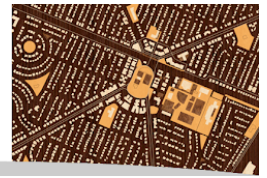
*Although not within the boundaries of the Village, the Ministry of Natural Resources has indicated that currently there are two separate licensed quarries in the Township of Rideau Lakes. Therefore any development proposed within 50 metres of the western edge of the Village boundary, which is within 500 metres of a licensed quarry, will only be*

*considered if it is supported by a compatibility study, undertaken by a qualified expert, which demonstrates that continued use of the mineral aggregate operation will not be precluded or hindered as a result of the proposed development. Implementation of this policy will require contact with the Township of Rideau Lakes. Current information with respect to the status and location of licensed mineral aggregate operations and technical advice in the preparation of the terms of reference for a compatibility study can be obtained from the Ministry of Natural Resources.*

On the basis of the above, lands along the western edge of the Village boundary are within the 500 metre influence area of a licensed quarry and are required to submit a compatibility study to demonstrate that the continued use of the existing mineral aggregate operation will not be impacted.

### **5.11 Summary of Mapping in the Local Official Plans**

Section 3.5.2 e) of the Counties OP enables local municipalities to refine the mapped boundaries of sand and gravel and bedrock resource areas in their respective Official Plans without an amendment to the Counties OP, until such time that the UCLG completes the ARMP. For ease of reference, Section 3.5.2 e) has been reproduced below.



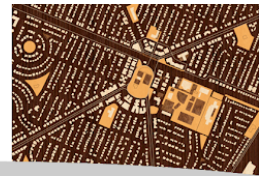
*3.5.2 e) Until such time that an Aggregate Resources Master Plan has been prepared and implemented through an amendment to the Counties Official Plan, local municipalities in their local municipal Official Plans may adjust or refine the extent of the sand and gravel resource areas identified on Schedule B and the bedrock resource areas identified by the Province, and the extent to which the policies associated with deposits of mineral aggregate resources apply within these areas, without an amendment to the Counties Official Plan. Refinements or adjustments to the extent of the sand and gravel resource areas and the bedrock resource areas may be based on the consideration of the viability of the local resources, the location of settlement areas and existing development, the location of natural heritage features and areas, and setbacks from waterbodies, among other matters, and will be subject to provincial approval.*

As noted above, while local refinements are permitted in the Counties OP, Provincial approval is still required, however, it is noted that the Province is not the approval authority for local Official Plans. In addition, the wording in this policy makes it clear that this applies until the UCLG completes the ARMP and implements the ARMP in the Counties OP through an Official Plan Amendment.

On the basis of the above, the UCLG could continue to permit the local municipalities to complete minor refinements to sand and gravel and bedrock resource boundaries in the same manner that it permits refinements to certain natural heritage features, as established in Section 4.2 a) of the Counties OP. However, if local refinements to sand and gravel and bedrock resources are permitted in the Counties OP, it should be clear in the policy framework that such refinements are subject to a review by the UCLG.

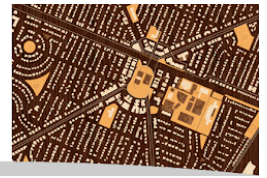
Sections 5.1-5.11 of this ARMP provided an overview of the policies in the 10 local Official Plans with respect to mineral aggregate designations and mapping. In this regard, 8 of the local municipalities include a map that identifies sand and gravel resources while only 5 of the local municipalities include a map that identifies bedrock resources.

In addition to the above, there are 6 local municipalities that have completed a scoping exercise for sand and gravel and/or bedrock resources. Based on a review of the local Official Plans, it is not clear exactly which factors (e.g. extent of buffers) were included in the scoping exercises, however there is reference to certain types of features being excluded (e.g. Provincially significant wetlands).



Below is a summary table of the mapped aggregate resources in the local Official Plans. The green highlighted rows indicate that a scoping exercise to delineate aggregate resources has been completed, as referenced in the respective Official Plan policies.

<b>Local Municipality</b>	<b>Sand and Gravel Resource Mapping</b>	<b>Bedrock Resource Mapping</b>
Athens	Yes	Yes
Augusta	No	Yes
Edwardsburgh Cardinal	Yes	Yes
Elizabethtown- Kitley	Yes	No
Front of Yonge	Yes	No
Leeds and the Thousand Islands	Yes	No
Merrickville- Wolford	Yes	No
North Grenville	Yes	Yes
Rideau Lakes	Yes	Yes
Westport	No	No



## 6. WHAT WE'VE HEARD

The purpose of this section of the ARMP is to provide a summary of the comments that have been received by the UCLG during the study process. The ARMP study process included a number of meetings with the Technical Steering Committee ('TSC') as well as open house meetings with industry stakeholders and the public. A statutory Public Meeting was also held to present the proposed Official Plan Amendment. Below is a summary of the meetings and comments that have been received by the UCLG.

### 6.1 Technical Steering Committee Meetings

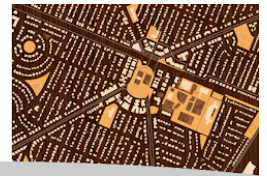
The ARMP study process was overseen by the TSC. The TSC includes Counties staff, local municipal staff, as well as individuals from the MMAH, MNDR and the MNRF. On March 5, 2021, the TSC held its first meeting and it provided an opportunity to introduce the consulting team, describe ARMP study process and obtain initial feedback from the members on the TSC on the considerations that should be included in the ARMP study process.

Following the preparation of the first draft ARMP, a second TSC meeting was held on October 4, 2021. The purpose of this meeting was to seek input from the TSC on the draft ARMP and proposed policies for the Counties OP.

A number of questions were raised about how the clusters of development would be identified and requests were made to the UCLG to prepare an informal guidance document on what should be considered in determining whether a cluster exists.

There were also comments on the assessment requirements in the proposed policy framework and who constitutes a qualified professional that would be able to review and comment on a mineral aggregate resources study. In this regard, it was indicated that local judgement would be required depending on the type of information that is being requested and that would need to be reviewed.

In addition to the above, there was also a discussion on the approach to bedrock mapping and a suggestion that bedrock overburden of 5 metres or more is not economically feasible. In this regard, staff from the MNDR/MNRF indicated that the ARIP 183 (and Provincial direction) has been that 8 metres of overburden is the generally accepted cut-off for overburden before extraction becomes unfeasible. However, there could be scenarios where a greater overburden is economically feasible when determining other factors such as distance to market or other operations.



## 6.2 Industry Stakeholder Meetings

On April 9, 2021, the Counties hosted an industry stakeholder meeting that was attended by 15 aggregate license holders within the Counties. The intent of this meeting was to introduce the ARMP study process and obtain initial input from license holders on study considerations.

A number of questions were raised about the proposed bedrock mapping and how the bedrock boundaries are determined. In this regard, it was noted that the Province has mapped mineral aggregate resources (as shown in the ARIP 183), which identifies Selected Sand and Gravel Resource Areas and Selected Bedrock Resource Areas. With respect to bedrock resources, the ARIP 183 recommends that areas with a drift thickness between 0 metres and 8 metres be identified in an Official Plan. The proposed bedrock mapping will implement the extent of resources within the ARIP 183 and in addition will also apply pre-emptive constraints, which may exclude certain lands.

There were also comments and questions raised about residential clusters and how these are determined. In addition to this, it was indicated that it would be helpful for aggregate producers to know where these clusters were located since aggregate producers own many properties and

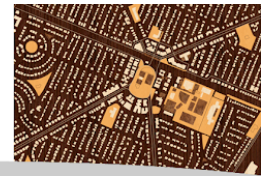
purchase properties with the intent of using them for aggregate purposes in the future. In this regard, it was noted that the identification of residential clusters would be directed to the local municipalities and that the Counties OP would provide direction to the local municipalities on considerations for identifying such areas.

Comments were also raised about rehabilitation and aggregate assessments. In this regard, it was noted that the Counties OP currently addresses rehabilitation and that future policy framework would address the requirements for aggregate assessments.

Following the preparation of the first draft ARMP, a second industry stakeholder meeting was held on October 21, 2021. The purpose of this meeting was to seek input from the industry stakeholders on the draft ARMP and proposed policies for the Counties OP.

On the basis of the above, there was discussion on the intent of buffers applied to the proposed mapping. In this regard, it was noted that buffered areas are intended to exclude lands from being required to complete an assessment when development is being proposed within those areas.

There were also questions on clusters of development and how they would be identified and what happens in the interim



between the time that the UCLG implements the ARMP in the Counties OP and the time that the local municipalities are updating their respective Official Plans. In this regard, it noted that the UCLG is focused on providing for a balance between rural development and protection of aggregate resources. It was further indicated that the determination of clusters of development would be a responsibility of the local municipalities and that the UCLG was considering the preparation of an informal guidance document to assist the local municipalities with making the determination.

### 6.3 Open House Meeting

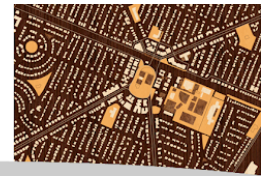
On May 31, 2021, the Counties hosted its first Open House to discuss the ARMP. The Counties invited 50 license holders to the open house, along with local municipalities, adjacent municipalities, agencies and bodies such as cultural and conservation representatives, utility providers and First Nations representatives. Public notice was also included in newspapers, on the Counties website and posted on social media. The Open House was held online using the Microsoft Teams meeting platform and there were about 20 people in attendance.

The purpose of the Open House was to introduce the consulting team, provide a brief overview of the current policy framework, describe the project objectives,

discuss the next steps in the work plan and to obtain preliminary feedback from participants.

A number of comments were made at the Open House on the extent of bedrock resources and the types of features that would be considered as pre-emptive constraints in the proposed mapping. Those in attendance suggested a number of features that should be considered in the mapping exercise such as the natural heritage system, local and/or regionally significant wetlands, forests, lands used for maple syrup production, lands that are classified as priority agriculture and the Rideau Canal, which is classified as a UNESCO World Heritage Site. It was noted that pre-emptive constraints are used to net out areas where aggregate extraction is unlikely and that the intent of the mapping exercise was to minimize the amount of areas being removed from the mapped resources in the ARIP 183. It was also mentioned that despite the final mapped resources, an application could still be made to establish a pit or quarry.

With respect to sand and gravel resources, a question was raised about the tertiary sand and gravel resources. During the Counties OP Review, the MNRF (through a comment letter dated December 2014) strongly recommended that primary, secondary **and** tertiary sand and gravel resources be



identified on a schedule in the Counties OP. The MNRF recommended this because of the limited amount of sand and gravel resources within the UCLG.

Another question was raised about how bedrock resources will be classified within the Counties OP. In this regard, it was noted that a Bedrock Resource Overlay would likely be included within the Counties OP, rather than a land use designation. This means that a parcel of land may have a land use designation **and** be subject to the Bedrock Resource Overlay. In this regard, any development and/or activities in this circumstance would be subject to the policies of the Bedrock Resource Overlay as well as the land use designation to determine if development and/or activities are permitted.

In addition to the above, there were a number of comments made about the mineral aggregate policy framework. In this regard, it was suggested that the policy framework be clear and simplistic and reflective of the Provincial requirements to protect aggregate resources for long-term use. Comments were also made about there being consideration within the policy framework for better enabling license expansion opportunities and when studies and/or an assessment should or should not be required. A comment was also raised about specifically considering setbacks from

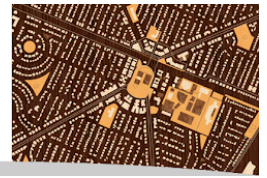
roadways as a pre-emptive constraint, which would enable development along roadways. It was also suggested that the policy framework be tailored to address sand and gravel resources and aggregate resources separately.

## 6.4 Summary of Other Comments

Below is a summary of the other comments that the UCLG has received as part of the ARMP study process.

On February 23, 2021 staff at the MNDMNRF provided links to a bedrock geology layer and Paleozoic geology layers that are accessible through the OGS. In addition, staff noted that there may be some potential for aggregate sources in Precambrian rocks and further mentioned that granites and gabbro are becoming more common sources of road aggregate and are also being quarried for decorative aggregate. It was also noted that there is potential for developing sandstones, as shown on the Paleozoic map, as both crushed aggregate and as dimension stone. While this information provides additional layers to consider, only the data from the ARIP 183 was used in delineating bedrock and sand and gravel resources as the PPS requires the use of this dataset.

On April 9, 2021, the MNDMNRF also provided some initial comments to inform



the ARMP and noted their desire to see a certain level of rigor around applying Section 2.5.2.5 of the PPS to planning applications, including applications for severances. For ease of reference, Section 2.5.2.5 of the PPS has been reproduced below.

*In known deposits of mineral aggregate resources and on adjacent lands, development and activities which would preclude or hinder the establishment of new operations or access to the resources shall only be permitted if: a) resource use would not be feasible; or b) the proposed land use or development serves a greater long-term public interest; and c) issues of public health, public safety and environmental impact are addressed.*

The MNDMNRF has noted that in assessing such applications, the quality of resource needs to be considered in conjunction with other constraints. The MNDMNRF also noted that severances in resource areas could have a significant constraining impact on the ability to extract a mineral resource and that the resources are non-renewable and fixed in place.

On April 14, 2021, Tomlinson Group ('Tomlinson') provided UCLG staff with their initial comments related to the protection of aggregate resources. Tomlinson provided an overview of PPS policies that require the protection of aggregate resources for long-

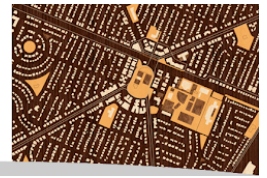
term use as well as the requirement of municipalities to restrict development or activities on lands adjacent to aggregate resources that would preclude or hinder extraction.

Tomlinson questioned the pre-emptive constraints and, in particular, how residential clusters are defined. In their opinion, site-specific applications should be the appropriate method to determine setbacks from adjacent residential uses rather than using constraints to remove areas from aggregate mapping.

Tomlinson also expressed concern with the statement that the Counties may pre-identify uses and types of applications that would not be subject to the preclude and hinder policies in the PPS.

In addition to the above, Tomlinson noted that a Counties OP Amendment should not be required if the local municipalities require an Official Plan Amendment and Zoning By-law Amendment (as is the current practice). In their opinion, requiring a planning process at the UCLG level would add unnecessary red tape and delay for aggregate applications.

Lastly, Tomlinson indicated that the mapping should not just be treated as a screening tool when other land uses are proposed. In this regard, Tomlinson noted that the function of the mapping is also to protect and identify



significant aggregate resources that should work in conjunction with the Counties OP policies.

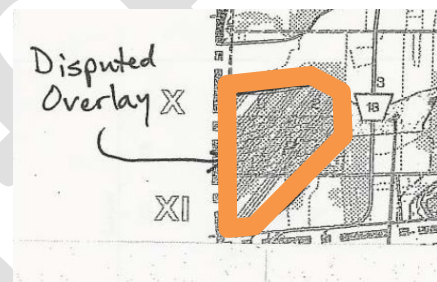
On May 14, 2021, Tom Graham from Songwood Farm provided background on an OMB Decision to remove an area behind the Songwood Farm property from the Bedrock Resource Overlay that was established in the North Grenville OP. Below is a summary of the appeal and the OMB Decision.

On May 11, 2009, the Municipality of North Grenville adopted the North Grenville OP and it was forwarded to the MMAH for approval May 29, 2009. Following the adoption and approval of the North Grenville OP, the MNDM released ARIP 183 on June 3, 2009. In response, based on communications between North Grenville, the MMAH and the MNRF, North Grenville modified Appendix A1 of the North Grenville OP to include a Bedrock Resource Overlay and the inclusion of policies related to bedrock resources. On August 20, 2009, the MMAH approved, with modifications, the North Grenville OP and a Notice of the Decision was issued on August 21, 2009.

Following the MMAH approval, the North Grenville OP was appealed to the OLT on August 31, 2009. One of the appeals was made by Tom Graham, the owner of Songwood Farm, on the basis that it was inappropriate to include the lands in the

Bedrock Resource Overlay because of the location of houses surrounding the property, topography and the existence of an unrated wetland.

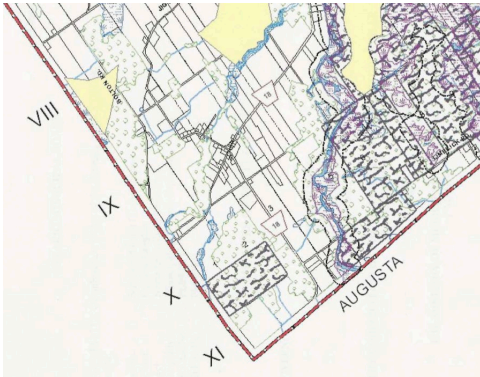
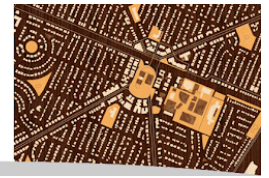
The graphic below shows the area subject to the appeal, otherwise referred to as the 'Disputed Overlay' in orange outline.



At the time, staff from the MNRF and the Municipality of North Grenville were involved in surveying the site and agreed that the lands should not be identified as being within the Bedrock Resource Overlay.

On February 2, 2010, the OMB issued a Decision to allow the appeal, in part, to the North Grenville OP. On this basis, the Decision modified Schedule A1 of the North Grenville OP to remove the Disputed Overlay from a portion of the Bedrock Resource Overlay.

Below is a graphic that shows the area that remains as Bedrock Resource Overlay in yellow.



On May 31, 2021, Mr. James Bertram provided the UCLG with a study prepared by Lansink Appraisals and Consulting ('Lansink Report') titled '*Case Study Analyses: Diminution in Price (if any) to Residential Real Estate, Located in the Vicinity of an Existing or Proposed Ontario Pit or Quarry*', dated July 2013. The purpose of the Lansink Report was to evaluate properties in southern and eastern Ontario that are located within the influence area of an active or proposed pit or quarry or haul route and to determine whether or not the presence of an aggregate operation impacted property value.

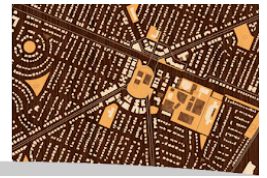
The study analyzed specific examples that occurred within the open real estate market in order to isolate the impact on property values caused by a pit or quarry. In this regard, the Lansink Report findings identified 19 examples from across Ontario (none in Leeds and Grenville) that suggested a very high probability that there would be price diminution if a residential property is

located within the influence of a pit, quarry or along a haul route.

On June 18, 2021, the UCLG received a letter from MHBC ('Tomlinson letter'), on behalf of Tomlinson, on the proposed aggregate mapping. In this regard, the letter provides a background on Tomlinson's aggregate production history, reviews the applicable PPS policy with respect to mineral aggregates and indicates that the proposed aggregate mapping should not only be viewed as a screening tool but that its function should also be to protect and identify significant aggregate resource areas and be supported by Official Plan policies.

In addition to the above, the Tomlinson letter recommends that the UCLG identify as much of the primary, secondary and tertiary sand and gravel resources as possible due to the relatively limited extent of sand and gravel resources within the UCLG. In addition, the proposed approach of using a cut-off of 8 metres or less is appropriate for bedrock resources, but cautioned situations where viable sand and gravel overlays high quality bedrock. In these circumstances, it is noted that the ARIP could show a greater depth of overburden for bedrock even though there are two viable deposits on a site.

The Tomlinson letter suggests that further discussion and/or evaluation is needed on the pre-emptive constraints (e.g. defining



residential clusters) and the 500 metre setback area from settlement areas. The Tomlinson letter also expressed concern with pre-identifying uses and types of applications that do not require consideration of the preclude and hinder policies in the PPS.

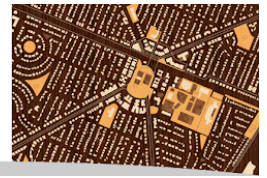
Lastly, the Tomlinson letter recommends that a Counties OP Amendment should not be required for aggregate applications and that only applications to the local municipalities for a local Official Plan Amendment and/or Zoning By-law Amendment should be required to avoid unnecessary duplication and red tape.

On June 23, 2021, the UCLG received a letter from MHBC ('Tackaberry letter'), on behalf of G. Tackaberry & Sons Construction Co. Ltd. ('Tackaberry'), on the proposed aggregate mapping and severance activity in rural areas. The Tackaberry letter provides a background on Tackaberry's aggregate production history, recognizes the requirement of the PPS to identify aggregate resources on a map and also includes a number of concerns about the pre-emptive constraints and severance approvals in the area. In this regard, the Tackaberry letter questions how residential clusters are defined and notes that depending on how residential clusters are defined it may arbitrarily exclude high quality resource areas where extraction could still be feasible.

Concerns were also raised about the 500-metre setback from settlement areas and whether this setback considers different types of operations.

In addition to the above, the Tackaberry letter recognizes that being identified on the proposed aggregate mapping does not mean that aggregate extraction is the only permitted use or activity. In this regard, the Tackaberry letter requests that the proposed policy framework specifically include policies that acknowledge that aggregate applications outside of mapped areas are not precluded or restricted. The Tackaberry letter also recommends that a Counties OP Amendment not be required for an application for an aggregate operation.

Lastly, the Tackaberry letter noted that there was discussion at the Open House about the ability to continue to accommodate severances in rural areas. Further, the Tackaberry letter notes that they have observed a higher level of severance activity recently near their licensed pits and quarries in the UCLG. The Tackaberry letter indicates that if municipalities are determining that such severances are appropriate and would not preclude or hinder existing aggregate operations then it is recommended that at a minimum the approval be conditional on placing a warning clause on title to ensure that the future purchaser or landowner is aware of the presence of a licensed



aggregate operation and mapped deposit areas. The Tackaberry letter further requests that the UCLG consider including this requirement in the policy framework for the ARMP.

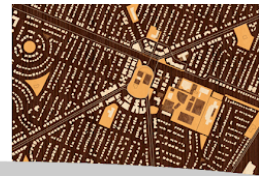
The Counties also received a number of requests to consider prioritizing bedrock into primary and secondary classifications (based on overburden depth and/or deposit depth) or limiting bedrock classifications to specified (e.g. 1 or 5 metre) overburden depths. These options were discussed with the Ministries who indicated that they are supportive of mapping that includes overburden depths of 0 to 8 metres as mapped in the ARIP 183. It was also noted that any deviation from this approach would not be consistent with the PPS, which required municipalities to identify deposits of mineral aggregate resources as delineated in the ARIP.

The UCLG also received two requests that pits and quarries be noted separately on the mapping. Pits and quarries are already identified by type on Schedule B to the Counties OP and this was not being proposed to change.

In addition to the above, on November 9, 2021, the UCLG also circulated a draft Official Plan Amendment ('OPA') to local municipalities and agencies for their review and comment. In response to the comments

received from this circulation, the proposed OPA was updated to clarify:

- The definition of a cluster of development (4 or more lots near an intersection, 3 or more lots close together on the same side of a road or across from each other). Sketches have also been prepared in a separate guideline document to visually show what a cluster of development could look like;
- The opportunity for local municipal staff to undertake a desktop review to waive/scope professional assessment requirements;
- Which government body requests/accepts professional assessments (local municipality, with the Counties reserving the right to request/accept where it is the approval authority);
- The transportation network considerations (ability of the road to handle traffic associated with extraction activities, and the distance from a provincial highway);
- That a Counties Official Plan application is not required and local official plans will determine which planning applications (local official plan amendment and/or zoning by-law amendment) are required for new or expanding aggregate operations; and,



- The natural and cultural heritage considerations when considering new aggregate operations or an expansion to an existing operation.

## 6.5 Statutory Public Meeting

On December 14, 2021, a statutory Public Meeting was held to consider the proposed Official Plan Amendment ('OPA') to implement the Aggregate Resources Master Plan. In accordance with the requirements of the Planning Act, a notice of statutory Public Meeting for the Counties proposed Official Plan Amendment was advertised in various newspapers across the Counties. The notice was also mailed to applicable agencies as set out in the Planning Act and interested members of the public, including aggregate producers and licence holders. The notice was also available on the Counties website and by request from Planning staff prior to the Public Meeting.

For the Public Meeting, staff prepared a report to the Planning Advisory Committee ('PAC') that provided an overview of the study process and consultation, followed by a discussion of comments and considerations that informed the preparation of OPA. Meridian Planning Consultants delivered a presentation to the PAC. Following the presentation, members of the PAC made comments on the proposed OPA. There were no members of the public

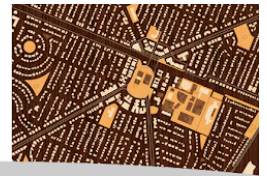
present who wished to speak on the amendment.

Following the question and comment period, the Clerk advised the PAC of three written correspondence documents that were received by the UCLG following the posting of the agenda for the Public Meeting. As a result of this, the PAC directed staff to review, consider and prepare a response to the three written correspondence documents. In addition, the UCLG also received a written comment after the public meeting that has also been reviewed and considered. Below is a summary of the comments and response to each.

On December 13, 2021, the UCLG received correspondence from the Municipality of North Grenville in the form of a Council resolution from their Council meeting on December 8, 2021. Staff provided Council with Report PD-063-2021, titled 'Aggregate Resources Master Plan – Support for Edwardsburgh Cardinal Resolution', and Council adopted the following resolution:

*“That Council support the resolution from Edwardsburgh Cardinal to reduce the overburden for bedrock resources as identified in the Aggregate Resources Master Plan from 8 metres to 5 metres.”*

As noted above, the Municipality of North Grenville's resolution supports a resolution



that was adopted by the Council for the Township of Edwardsburgh-Cardinal at their Council meeting on September 27, 2021. The resolution indicated that bedrock resources with an overburden of 8 metres was uneconomical and that an overburden of 5 metres would be more economical.

The UCLG received the Township of Edwardsburgh-Cardinal resolution in November 2021. Through the process of preparing the Aggregate Resources Master Plan, the UCLG also received a number of requests to consider limiting bedrock classifications to specified overburden depths. These options were discussed with the provincial Ministries and they confirmed that bedrock mapping at 5-metre intervals for overburden were not available.

The Ministries further indicated that they were not supportive of proposed mapping that implements an alternative overburden cutoff other than what is recommended in the Aggregate Resource Inventory Paper #183 (ARIP), which identified significant bedrock resource area as those areas that have an overburden depth of 0 to 8 metres. The Ministries also indicated that bedrock operations at 0 to 8 metres are feasible particularly when planning for the long-term and that any different classifications of bedrock overburden mapping is not consistent with the Provincial Policy Statement (2020), which requires

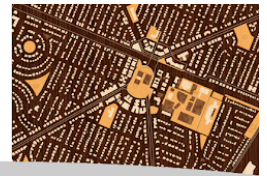
municipalities to identify deposits of mineral aggregate resources as delineated in the ARIP as established by the province. In this regard, no changes were recommended to the proposed OPA.

On December 14, 2021, the UCLG received correspondence from the Township of Augusta in the form of a Council report prepared by Planning staff (Report 2021-120). The recommendation contained within the report reads as follows:

*“THAT the Planner’s report of December 13, 2021, be received for information and this report be forwarded to the United Counties of Leeds and Grenville for consideration of the two recommendations respecting the proposed Aggregate Resources Amendment, as highlighted on page 3.”*

The two recommendations contained within the report are reproduced below.

1. It is recommended that in lieu of listing “exempted” types of development or planning applications from having to undertake an aggregates assessment study, for clarity, ease of implementation, and transparency, that the policies instead, or in addition to, list the types of applications that would warrant a consultant’s assessment study of the impact on aggregate resources to support certain planning applications, e.g. new residential lot creation applications,



institutional uses, Official Plan Amendments, other.

2. It is recommended that these adjacent land/buffers of 300 m from sand and gravel resource areas and 500 m from Bedrock Resource Areas be added as a “note” to the screening map, for ease of policy reference/implementation, so these potential influence areas are flagged more immediately on the screening map itself.

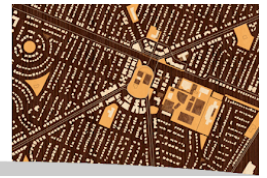
In response to the first recommendation above, the proposed OPA includes a list of planning applications that are exempt from an aggregate assessment. This means that if a development application is not on the list, then it requires an aggregate assessment. It is our opinion that this approach provides more clarity, rather than identifying the types of planning applications or scenarios where an aggregate assessment would be required. It is noted that there are two other baskets of exemptions as well that relate to agricultural uses and development as well as clusters of residential development. In this regard, no changes were recommended to the proposed OPA.

In response to the second recommendation above, the current Schedule A to the proposed OPA 3 includes the Selected Sand and Gravel and Bedrock Resource Areas as well as constraints and buffers that have been applied. However, it is noted that the

policy framework also includes reference to influence areas for sand and gravel (300 metres) and bedrock resources (500 metres) and this is not currently identified on the proposed Schedule A. In this regard, it was recommended that Schedule A to the proposed OPA be updated to include a note that references the policies that address influence areas.

On December 13, 2021, the UCLG received emailed comments from Mr. Graham of Songwood Farm on the proposed OPA. Mr. Graham’s first comment concerns significant groundwater recharge areas. It is indicated that many of the areas identified as ‘Selected Sand and Gravel Resource Area (Tertiary)’ on Schedule A coincide with RVCA’s Significant Groundwater Recharge Areas. Mr. Graham feels that the deposits of sand and gravel should not be identified as gravel resources and should otherwise be protected as areas for natural features such as wildlife and drinking water.

Mr. Graham’s second comment indicates that the draft Aggregate Resources Master Plan and the proposed OPA do not include reference to Source Water Protection, Significant Groundwater Recharge Area and Highly Vulnerable Aquifers. It is noted that Mr. Graham provided a similar comment to the UCLG on October 18, 2021 in response to his review of the initial draft Aggregate Resources Master Plan.



In response to Mr. Graham’s comments, the Source Water Protection Act continues to apply to all lands identified in Appendix 3 to the UCLG Official Plan and this includes lands that may also be identified as Selected Bedrock Resource Area or a Selected Sand and Gravel Resource Area in Schedule A to the proposed OPA. Section 4.4 of the UCLG Official Plan currently contains a number of policies on water resources and source water protection. It is noted that a number of updates were made to policies contained in the proposed OPA to include locally significant wetlands, other wetlands, watercourses and drinking water sources. In this regard, no changes were recommended to the proposed OPA.

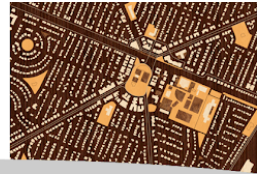
On December 31, 2021, the UCLG received comments from Mr. Tony Sevelka of International Forensic & Litigation Appraisal Services Inc. on the draft Aggregate Resources Master Plan (October 4, 2021). Mr. Sevelka’s comments are focused on the issue of fly-rock that is associated with blasting at aggregate operations. Mr. Sevelka considers fly-rock as an adverse effect and suggests that aggregate policies should require blasting quarries to locate further than 1,000 metres from sensitive receptors to provide protection from fly-rock.

It is noted that a number of constraints and buffers have been applied to the area

identified as Selected Sand and Gravel and Bedrock Resource Areas. These are based on known features and on fixed boundaries such as settlement area boundaries. Aggregate operations that use blasting may generate fly-rock and the extent of the impact of fly-rock can vary from site-to-site, the extent of blasting and other components of the operation itself. In addition, the need for setbacks is determined through the Aggregate Resources Act process that is administered by the province. As a result of the associated variability of fly-rock, it is our opinion that establishing a minimum setback for fly-rock in the Official Plan is not appropriate.

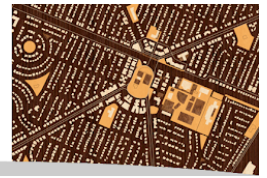
In addition to the above, as of January 1, 2022, new operating requirements for the Aggregate Resources Regulation (Ontario Regulation 244/97) came into force that require aggregate operations with a blasting component to implement measures to prevent fly-rock from leaving the site during blasting if a sensitive receptor is located within 500 metres of the boundary of the site.

On the basis of the above, it is noted that the proposed OPA requires any application for a new or expanding operation to demonstrate that certain factors will be minimized and this includes noise, dust and vibration to name a few. In this regard, it was recommended that the proposed OPA be



updated to add fly-rock to the list of factors to be considered when a planning application is submitted for a new or expanding aggregate operation.

Draft



## 7. PROPOSED MAPPING

The purpose of this section of the ARMP is to provide an overview of the factors that were considered in developing the proposed mapping. **Appendix A** to this ARMP includes a map of the proposed Selected Bedrock Resource Areas and **Appendix B** includes a map of the proposed Selected Sand and Gravel Resource Areas.

Section 2.5.1 of the PPS requires that all Official Plans contain mapping showing the location of deposits of mineral aggregate resources.

It is important to note that mapping of deposits of mineral aggregate resources are intended to serve as a screening tool when applications to develop other land uses are proposed. A screening tool is a resource used by a municipality and/or applicant to determine which land use designations and other land use considerations apply when a new land use is being proposed.

In addition to the above, the mapping of deposits of aggregate resources is also intended to ensure that the mineral aggregate resources are protected for long-term use. While the area that is the site of Selected Bedrock Resource Areas is significant, it is important to note that it does not establish the principle of establishing a resource use on the lands and the same

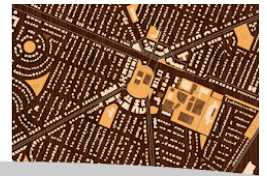
approval process applies for new resource uses regardless of location. It also does not mean that the use of lands for a mineral aggregate operation is a preferred land use over other land uses provided the other land uses do not preclude or hinder extraction.

In the case of the Counties OP (as approved by the MMAH on February 19, 2016), Schedule B: Mineral and Mineral Aggregate Resources already identifies the location of Selected Sand and Gravel Resource Areas of primary, secondary and tertiary significance. However, Schedule B does not include mapping showing the location of Selected Bedrock Resource Areas because of concerns about the accuracy of the mapping and the extent of the area to be included at the time that the Counties OP was prepared.

Below is an overview of the proposed mapping of Selected Sand and Gravel and Bedrock Resource Areas.

### 7.1 Proposed Selected Bedrock Resource Area Map

The ARIP 183 includes information on the location of Selected Bedrock Resource Areas in the UCLG. It is noted that Aggregate Resources of Ontario ('ARO') updates aggregate mapping on an annual basis when new information is acquired by the MNDMNR, such as new boreholes, pits/quarries or other fieldwork collected and verified by OGS staff. In this regard, the



ARO data relied upon as a base for the UCLG ARMP identifies additional lands as Selected Bedrock Resource Areas than the ARIP 183.

The ARIP 183 recommends that areas with a drift thickness between 0 metres and 8 metres be identified in an Official Plan. In this regard, any identified bedrock resources that contain a drift thickness of greater than 8 metres, as per the ARIP 183, was not included in the proposed Selected Bedrock Resource Area map for the ARMP.

As noted earlier in this ARMP, the UCLG is underlain by Precambrian rocks, the Cambro-Ordovician Potsdam Group and the Ordovician March, Oxford and Gull River Formations. Areas of the Cambro-Ordovician Potsdam Group include the Covey Hill and Nepean Formations, which consists of fine- to coarse-grained quartz sandstone with interbeds of quartz-pebble conglomerate (as noted in the ARIP 183). With respect to these formations in certain areas, the ARIP 183 notes the following:

*Areas of the Potsdam Group have not been identified on the map nor have drift thickness or depth of overburden been calculated because this group has no potential for use in aggregate production.*

On the basis of the above, these formations are within the ARIP 183 dataset but are not

identified as being within a Selected Bedrock Resource Area.

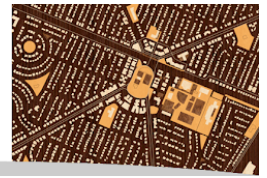
On the basis of the above, only the 7 areas identified as Selected Bedrock Resource Area, as identified in the ARIP 183, were identified on the proposed Selected Bedrock Resource Area map.

In addition to the above, there are a number of physical constraints that were considered in preparing the proposed mapping and these include:

- Provincially significant wetlands;
- Provincially significant Areas of Natural and Scientific Interest ('ANSI');
- Lakes; and,
- Rivers.

The proposed mapping also took into account buffer areas from a number of features. In this regard, the following lands were excluded from the proposed mapping:

- Lands within 500 metres of the boundary of a settlement area;
- Lands within 120 metres of the boundary of a Provincially significant wetland;
- Lands within 120 metres of the boundary of a Provincially significant ANSI; and,



- Lands within 500 metres of the boundary of lakes and rivers.

The buffer areas above are intended to be an exclusion area, meaning that the lands within a buffer area are not captured within a resource area. The buffer areas are consistent with those implemented in other municipalities in Ontario.

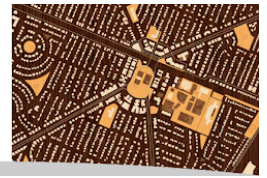
Concerns have been raised about the impacts of the Selected Bedrock Resource Area map on future land use in rural areas, particularly as it relates to rural lot creation. At the Open House, lands within and adjacent to rural residential clusters were identified as a potential pre-emptive constraint. Given the size of the UCLG, pre-identifying all of the potential rural residential clusters for exclusion in the Counties OP would be very challenging and is best left to the local municipalities, where local context can be considered. In this regard, clusters of development in agricultural and rural lands designations are addressed in the proposed policy recommendations.

## 7.2 Proposed Selected Sand and Gravel Resource Area Map

Schedule B to the Counties OP currently identifies primary, secondary and tertiary Selected Sand and Gravel Resource Areas. However, the resources on this map do not

exclude all of the physical constraints and other buffer areas identified above in **Section 7.1** of this ARMP.

On the basis of the above, the proposed Selected Sand and Gravel Resource Areas map modifies the existing Selected Sand and Gravel Resource Areas as shown on Schedule B to the Counties OP as they relate to Provincially significant wetlands, ANSI's, lakes, rivers and settlement areas in the same manner as described in **Section 7.1** as it relates to Selected Bedrock Resource Areas.



## 8. OFFICIAL PLAN RECOMMENDATIONS

The purpose of this section of the ARMP is to provide a number of proposed policy recommendations and the rationale behind the proposed policies.

According to the proposed **Appendix A** to this ARMP, significant amounts of land are identified as being the site of Selected Bedrock Resource Areas in particular and concerns have been expressed about the implications of including so much land in this category on the potential for future development.

When Selected Bedrock Resource Areas are identified in an Official Plan, Section 2.5.2.5 of the PPS is triggered and this section reads as follows:

*In known deposits of mineral aggregate resources and on adjacent lands, development and activities which would preclude or hinder the establishment of new operations or access to the resources shall only be permitted if:*

*a) resource use would not be feasible; or*

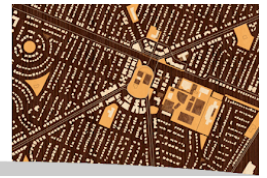
*b) the proposed land use or development serves a greater long-term public interest; and*

*c) issues of public health, public safety and environmental impact are addressed.*

As set out in Section 2.5.2.5 of the PPS, an assessment of the impacts of proposed development on the feasibility of resource extraction is required to be carried out whenever development is proposed, with development being defined as development requiring a Planning Act approval. It is noted that items a) and b) in Section 2.5.2.5 are separated by the word “or”.

This means that a case can be made that a proposed land use or development serves a greater long-term public interest than a proposed resource use even if it is determined that resource use would be feasible. This means that the potential exists as part of the review of any application to make a determination on what use is in the greater long-term public interest to consider. In addition to the above, it is noted that one of the tests is: “*The resource use would not be feasible.*” In this regard, the presence of a resource is not in of itself a determinant of whether it is feasible to extract. There are a number of factors that need to be considered to determine feasibility and these are identified in the proposed policies.

This section includes a set of proposed policies for the UCLG to consider. These proposed policies were prepared as a consequence of the discussions held with



the local municipalities, stakeholders and the public, our experience and our research into the approaches taken in other municipalities. Below is a brief overview of approaches taken in other municipalities.

In 2017, the Ministry approved an Official Plan Amendment for the County of Lennox & Addington ('L&A OP') that addressed selected bedrock resources and implemented the PPS 2014. In this regard, the L&A OP identified selected sand and gravel and bedrock resource areas on a map and includes policies that aim to protect mineral aggregate resource supply while also minimizing the impacts to planning approvals in the agricultural and rural areas. The policies implement the preclude and hinder tests as required by the PPS and also include a number of exemptions from the preclude and hinder tests. An influence area of 300 metres from a pit or 500 metres from a quarry is also established within the policy framework.

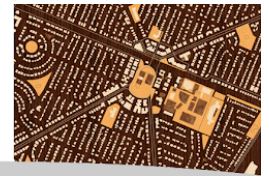
In addition to the above, in 2019 the District Municipality of Muskoka (District') adopted a new Official Plan ('Muskoka OP') that also contains policies that address sand and gravel and bedrock resources. The Muskoka OP identifies primary and secondary sand and gravel resource areas however it does not identify selected bedrock resource as the District is underlain by Precambrian gneissic rock that exhibits wide variations in lithology

and aggregate quality. In this regard, the Muskoka OP recognizes that there may be local knowledge and locations of existing quarries that may be considered by the Area Municipalities if there is a desire to protect local significance.

The Muskoka OP requires a land use compatibility assessment for development that is within 300 metres of a pit or 500 metres of a quarry.

In addition to the above, the Muskoka OP identifies development that is exempted from an aggregate assessment such as development in urban centres and community areas, rezoning applications for development or expansions of a commercial, industrial or recreational use in the Rural Area or Waterfront Area designations, adjustments of a lot line for legal or technical reasons and any application for a minor variance, regardless of location.

The Region of Halton Official Plan ('Halton OP') is another example of an Official Plan that identifies and includes policies that apply to bedrock resources. The Halton OP requires a proponent of any land use changes through the Regional or Local official plan amendments, zoning amendments or consents to complete an assessment if the proposed development is within 300 metres of a pit or 500 metres of a quarry. In this regard, there are no



exemptions to the requirement to complete an assessment if a proposed development is located within the influence areas identified above. However, it is noted that the Provincially significant wetlands and an area around them were excluded from the mapping in the Official Plan showing where the resource is located. For shale resource areas, the resource mapping also excludes lands within 500 metres of settlement areas. This approach was supported by the Province.

On the basis of the above, the policies contained in the Official Plans for Lennox and Addington, Muskoka and Halton serve as relevant examples for the types of policies that could be considered by the UCLG for the Counties OP.

On the basis of the above, the proposed policies for the UCLG aim to create a balance between protecting mineral aggregate resource areas and at the same time minimizing the impact of Section 2.5.2.5 of the PPS on future Planning Act approvals in the Agricultural Area and Rural Lands designations in the Counties OP.

As mentioned previously in this ARMP, Section 3.5.2 of the current Counties OP applies to Mineral Aggregate Resources. The proposed policies are intended to replace or modify the policies contained in Section 3.5.2 of the Counties OP.

The Official Plan recommendations have been divided into the following sub-sections:

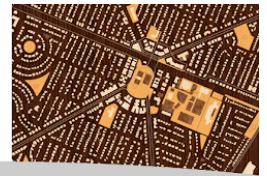
1. Assessment Requirements;
2. Assessment Exemptions;
3. New or Expanding Mineral Aggregate Operations; and,
4. Mapping.

Below is an overview of the recommendations for updates to the Counties OP. Each subsection (except for the mapping sub-section) includes recommended policy changes and clarifies which section(s) of the Counties OP should be retained, modified or replaced.

## 8.1 Assessment Requirements

The purpose of this section of the ARMP is to provide a set of policies that address assessment requirements for lands that are within or adjacent to an aggregate resource area. When development is proposed within or adjacent to a resource area, an assessment may be required to determine whether the proposed development will preclude or hinder the extraction of a known aggregate resource.

This section includes a number of policies that deal with '*Assessment Requirements for Development in a Mineral Aggregate Resource Area*'. These policies are intended to replace those that are currently contained in **Sections 3.5.2 c), d) and g)** of the Counties



OP. It is proposed that **Sections 3.5.2 a) and e)** be updated and **Sections 3.5.2 b), f) and h)** be retained. Below is a brief description of each of the above-mentioned policies.

Section **3.5.2 a)** of the Counties OP recognizes that mineral aggregate resources need to be protected for long term use, references the Counties OP schedule where these resources are identified and clarifies that the identification of resources does not mean that all lands will be used for aggregate extraction.

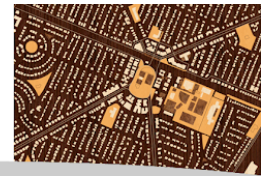
On the basis of the above, it is recommended that **Section 3.5.2 a)** be retained and updated to indicate that bedrock resources, in addition to sand and gravel resources, are also shown on a Schedule to the Counties OP. In addition, the sentence that notes that bedrock resources will be identified in local Official Plans should also be removed.

**Section 3.5.2 b)** of the Counties OP recognizes that there is the potential for viable deposits of mineral aggregates beyond those that are identified in the Counties OP. This means that an application can be made on lands beyond those that are identified, subject to there being sufficient quantity and quality of the resource and supporting studies. It is recommended that **Section 3.5.2 b)** be retained.

**Section 3.5.2 c)** of the Counties OP indicates that the Counties will complete an Aggregate Resources Master Plan that will identify resources and be implemented through an amendment to the Counties OP. In this regard, it is recommended that **Section 3.5.2 c)** be deleted in its entirety.

**Section 3.5.2 d)** of the Counties OP indicates that sand and gravel and bedrock resources will be identified in the local OPs until the Counties complete its Aggregate Resources Master Plan. In this regard, it is recommended that **Section 3.5.2 d)** be deleted in its entirety.

**Section 3.5.2 e)** of the Counties OP directs local municipalities to identify sand and gravel and bedrock resources in their local OPs and permits the adjustment or refinement of boundaries without a County Official Plan Amendment until the time that the Counties completes its Aggregate Resources Master Plan. This policy also sets out the considerations for making such an adjustment and is subject to Provincial approval. It is recommended that **Section 3.5.2 e)** be updated to allow for minor adjustments or refinements to the boundaries of sand and gravel and bedrock resources without an amendment to the County OP, subject to the review of the County, instead of the Province, who are not the approval authority for local Official Plan Amendments.



**Section 3.5.2 f)** of the Counties OP requires the completion of an assessment for development proposals on lands within or adjacent to a known deposit of mineral aggregate resources. The policy clarifies that ‘adjacent to’ includes lands within 300 metres of a sand and gravel resources and 500 metres of a bedrock resource area. In this regard, it is recommended that **Section 3.5.2 f)** be retained.

**Section 3.5.2 g)** of the Counties OP indicates that until the Counties complete its Aggregate Resources Master Plan, the local municipalities may require that studies be completed to demonstrate that proposed development will not preclude or hinder the establishment of a new aggregate operation. The policy also provides for the waiving of studies in certain land use designations. It is recommended that **Section 3.5.2 g)** be deleted in its entirety.

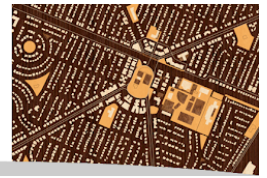
**Section 3.5.2 h)** of the Counties OP requires that mineral aggregate resource conservation be undertaken, including accessory aggregate recycling facilities within operations, where feasible. It is recommended that **Section 3.5.2 h)** be retained.

In addition to the above, below are the proposed policies that address the assessment requirements for development

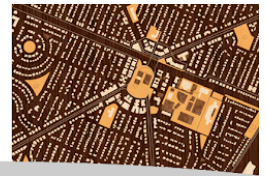
in a mineral aggregate resource area and adjacent lands.

### **3.5.2.3 Assessment Requirements for Development in a Mineral Aggregate Resource Area and Adjacent Lands**

- a) *Schedule B identifies deposits of mineral aggregate resources, including Selected Sand and Gravel Resource Areas and Selected Bedrock Resource Areas, throughout the Counties. However, the identification of these deposits on Schedule B does not necessarily mean that all areas identified are appropriate for the development of mineral aggregate operations, because of reasons such as natural heritage, land use compatibility, transportation, accessibility, quantity and/or hydrogeological constraints nor does it imply that the quality of the mineral aggregate resource at any given location is also suitable. The effect of the mapping is such that it acts as a screening tool for the purposes of this section of the Plan.*
- b) *For the purposes of the policies in Section 3.5.2 d) of this Plan, adjacent lands means:*
  - i. *Lands within 300 metres of Selected Sand and Gravel Resource Areas and 500 metres of Selected Bedrock Resource Areas within the boundary of the Potential Development Constraint*

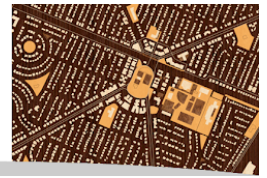


- Overlay (Screening Map) as identified on **Schedule B** of this Plan;*
- ii. Lands within 300 metres of the licensed boundary of an existing pit and lands within 500 metres of the licensed boundary of an existing quarry and,*
  - iii. Notwithstanding i. above, adjacent lands do not apply to:*
    - i. Lands within 500 metres of the boundary of a settlement area;*
    - ii. Lands within a Provincially significant wetland or within 120 metres of the boundary of a Provincially significant wetland;*
    - iii. Lands within a Provincially significant Area of Natural and Scientific Interest or within 120 metres of the boundary of a Provincially significant Area of Natural and Scientific Interest; and,*
    - iv. Lands within 500 metres of the boundary of lakes or rivers.*
  - c) In cases where a proposed development is not exempt under Section 3.5.2.3 b) of this Plan or in accordance with Sections 3.5.2.4, 3.5.2.5 and 3.5.2.6, the local municipality may require studies to demonstrate that the proposed development will not preclude or hinder current or future extraction operations and/or access to the resources or in the alternative that resource use would not be feasible or alternatively that the proposed land use or development serves a greater long-term public interest and that issues of public health, public safety and environmental impact are addressed.*
  - d) In addition to the above and in cases where a proposed development is not exempt under Section 3.5.2.3 b) of this Plan or in accordance with Sections 3.5.2.4, 3.5.2.5 and 3.5.2.6, the local municipality, may scope or waive any of the assessment requirements in Section 3.5.2.3 e) as a result of undertaking a desktop analysis of the available information against the criteria in Section 2.5.2.5 of the Provincial Policy Statement to justify that no further information is required to assess the proposed development, if the local municipality is satisfied that the information is not required or not relevant to assess an application for a proposed development on lands that have been identified as deposits of mineral aggregate resources or adjacent lands.*
  - e) The following factors shall be considered by the local municipality, where relevant and appropriate, in determining whether an assessment is required in support of an application for development on lands that have been identified as deposits of mineral aggregate resources in accordance with the applicable Aggregate Resource*



*Inventory Paper for the Counties, and adjacent lands on Schedule B and the criteria to be considered in an assessment if it is determined to be required:*

- i. The nature and location of other aggregate and non-aggregate resource uses in the area and their potential impact on the feasibility of establishing a mineral aggregate operation on the subject lands and adjacent lands;*
  - ii. The nature and location of the potential land uses in the area based on the land use policies in the local Official Plan and zoning bylaw particularly if the land uses have yet to be established;*
  - iii. The nature of the current road network in the area, consideration of future roads being added to the road network in the area and the ability to potentially accommodate mineral aggregate operations in the future. It is recognized the provincial highway network is the main transportation route to markets;*
  - iv. The configuration of the parcels of land in the area and whether the parcels are individually or collectively large enough and of a shape that would support mineral aggregate operations;*
  - v. The depth of the overburden on the subject lands and on adjacent lands and whether the depth precludes the economical extraction of the mineral aggregate resource;*
  - vi. The quality of the mineral aggregate resource on the subject lands and in the immediate area;*
  - vii. The nature and potential impact of natural heritage features and areas in the immediate area on the potential for mineral aggregate operations in the area in the future;*
  - viii. The nature and location of any sensitive surface water and ground water features in the area and its impact on mineral aggregate operations; and,*
  - ix. The presence of significant built heritage resources, protected heritage properties, significant cultural heritage landscapes and significant archaeological resources on the subject lands or in the immediate area.*
- f) Where an assessment is determined to be required, proponents shall submit a mineral aggregate resources study completed by a qualified professional to demonstrate that the criteria of Section 3.5.2.3 e) have been met to the satisfaction of the local municipality. The Counties and/or the local municipality may look to the Province to provide information with respect to proposals*



*affecting deposits of mineral aggregate resources. Aggregate resource testing and statements from local industry representatives may be recommended to better assess the viability of the resource.*

- g) In cases where the Counties is the approval authority, the Counties has the ability to request an assessment, the methodology and conclusions of which shall be to the satisfaction of the Counties. The Counties also has the ability to have the mineral aggregate resources study peer reviewed at the applicant's cost.*

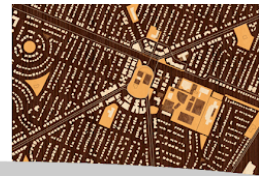
## 8.2 Assessment Exemptions

The purpose of this section of the ARMP is to clarify the types of scenarios or development that may be exempt from an assessment described in the proposed policies in **Section 8.1**.

Below are a number of proposed policies that deal with exemptions as they relate to clusters of development, agricultural related development and other types of Planning Act applications that could be exempt from requiring an assessment as per Section 2.5.2.5 of the PPS.

### **3.5.2.4 Exemption #1 to Section 3.5.2.3 – Clusters of Development in the Agricultural Area and Rural Lands Designations**

- a) Any form of development within clusters of non-agricultural development outside of settlement areas is exempted from Section 3.5.2.3 of this Plan, with the determination of where such clusters are located to be made by the local municipalities on a site-specific basis based on policies contained in the municipal Official Plan.*
- b) Local municipal Official Plans shall contain policies that address clusters of development. Until such time, the policies contained in the Counties Official Plan shall provide guidance on the determination of a cluster of development, to be made on a site-specific basis.*
- c) Examples of clusters include 4 or more lots near the intersection of two roads (on one or more corners), 3 or more lots that are close together on the same side of the road or across from each other.*
- d) Factors to consider in making a determination on whether a cluster exists are below:*
- i. For such a cluster to be a cluster, the residential and other non-agricultural uses in the cluster should be predominately located on smaller lots that do not exceed 2.5 hectares in size.*
  - ii. If one or more uses inside the cluster were located on lots that have a considerable depth, only the portion*



*of the lots in the cluster would be considered.*

- iii. Vacant and potentially developable land within the cluster would be included in the cluster provided the residential and other non-agricultural uses are located close enough together.*
- iv. Lands between the edge of a cluster and a nearby physical feature such as a watercourse can be included in the cluster as well.*

### **3.5.2.5 Exemption #2 to Section 3.5.2.3 – Agricultural Development**

*The development and/or expansion of an agricultural use, an agriculture-related use and/or an on-farm diversified use, whether it involves the development of buildings or structures or not, is exempted from Section 3.5.2.3 of this Plan, regardless of whether a Planning Act approval is required.*

### **3.5.2.6 Exemption #3 to Section 3.5.2.3 – Types of Planning Act Applications**

*The following applications are exempted from Section 3.5.2.3 of this Plan:*

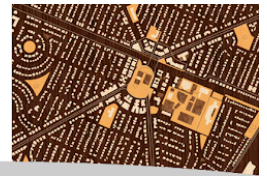
- a) The creation of a new lot for an agricultural use or an agriculture-related use;*
- b) The creation of a lot to accommodate an existing habitable farm dwelling that*

*has become surplus to a farming operation;*

- c) The adjustment of a lot line for legal or technical reasons;*
- d) The re-zoning of land for the development or expansion of a commercial, industrial or recreational use in the Agricultural Area and Rural Lands designations provided an amendment to the local Official Plan is not required and provided the use does not include the establishment of dwelling units or accommodation units;*
- e) The expansion of a legal non-conforming use, provided such an expansion meets all of the other tests in the local Official Plan; and,*
- f) Any application for site plan or minor variance, regardless of location.*

## **8.3 New or Expanding Mineral Aggregate Operations**

The purpose of this section of the ARMP is to propose other policies that apply to mineral aggregate operations. **Section 3.5.2.1** of the current Counties OP addresses ‘New or Expanding Mineral Resource Operations’ and is proposed to be retitled ‘New or Expanding Mineral Aggregate Operations’. It is recommended that **Section 3.5.2.1 a)** and **b)** of the Counties OP be modified, and **Section 3.5.2.1 c)** be replaced with the proposed policies below under ‘New or Expanding Mineral Aggregate Operations’. In addition, it is recommended that **Sections**



**3.5.2.1 d), e) and f)** of the Counties OP be retained. Below is a brief description of each of the above-mentioned policies.

**Section 3.5.2.1 a)** requires a local Official Plan Amendment for any new or expanding mineral aggregate operations, but not a Counties OP Amendment. In this regard, it is recommended that **Section 3.5.2.1 a)** be modified to remove references to local Official Plan Amendments, but retain the policy language that confirms that a Counties OP Amendment is not required to identify new or expanding aggregate resource operations.

**Section 3.5.2.1 b)** identifies evaluative criteria that must be met when considering new or expanding aggregate operations and a local Official Plan Amendment. It is recommended that **Section 3.5.2.1 b)** in the Counties OP be modified to include additional evaluative criteria such as:

- *Significant natural heritage features, including locally significant wetlands, and other wetlands;*
- *Watercourses and fish habitat;*
- *Species at risk habitat;*
- *Drinking water sources including municipal and private drinking water sources;*
- *The impact of noise, dust, fly rock and vibration; and,*

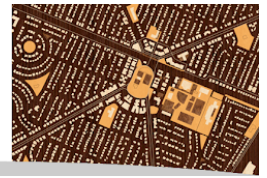
- *The impact of a mineral aggregate operation on agricultural resources cultural-heritage resources and water resources.*

**Section 3.5.2.1 c)** enables the Counties ARMP to consider studies that consider potential cumulative impacts of proposed aggregate operations on past, present and other known mineral aggregate resource applications in the vicinity. In this regard, there are other proposed policies in this section of the ARMP that deal with assessing cumulative impacts and for this reason it is recommended that **Section 3.5.2.1 c)** be deleted in its entirety.

**Section 3.5.2.1 d)** requires a pre-application consultation with the Province, Counties, local municipality and Conservation Authority. It is recommended that **Section 3.5.2.1 d)** be retained in the Counties OP.

**Section 3.5.2.1 e)** enables the Counties to provide comments on an application made under the Aggregate Resources Act if the proposed operation does not require a Counties or local planning approval. In this regard, it is recommended that **Section 3.5.2.1 e)** be retained in the Counties OP.

**Section 3.5.2.1 f)** encourages the Province to ensure that all appropriate requirements are imposed as conditions



In addition to the above, below are the proposed policies that address mineral aggregate operations.

***New or Expanding Mineral Aggregate Operations***

- f) Mineral aggregate operations shall be protected from development 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.*
- g) Existing mineral aggregate operations that are licensed pursuant to the Aggregate Resources Act shall be permitted to continue without the need for official plan, zoning by-law or community planning permit amendment under the Planning Act. Where the Aggregate Resources Act applies, only processes under the Aggregate Resources Act shall address the depth of extraction of new or existing mineral aggregate operations. When a license for extraction or operation ceases to exist, Section 3.5.2 d) of this Plan continues to apply.*
- h) When considering a new mineral aggregate operation, the co-location or grouping of such facilities and recycling of materials and progressive rehabilitation should be encouraged by the Counties and/or local municipality to*

*be addressed by the Provincial approval authority.*

- i) Extraction shall be undertaken in a manner which minimizes social, economic and environmental impacts.*

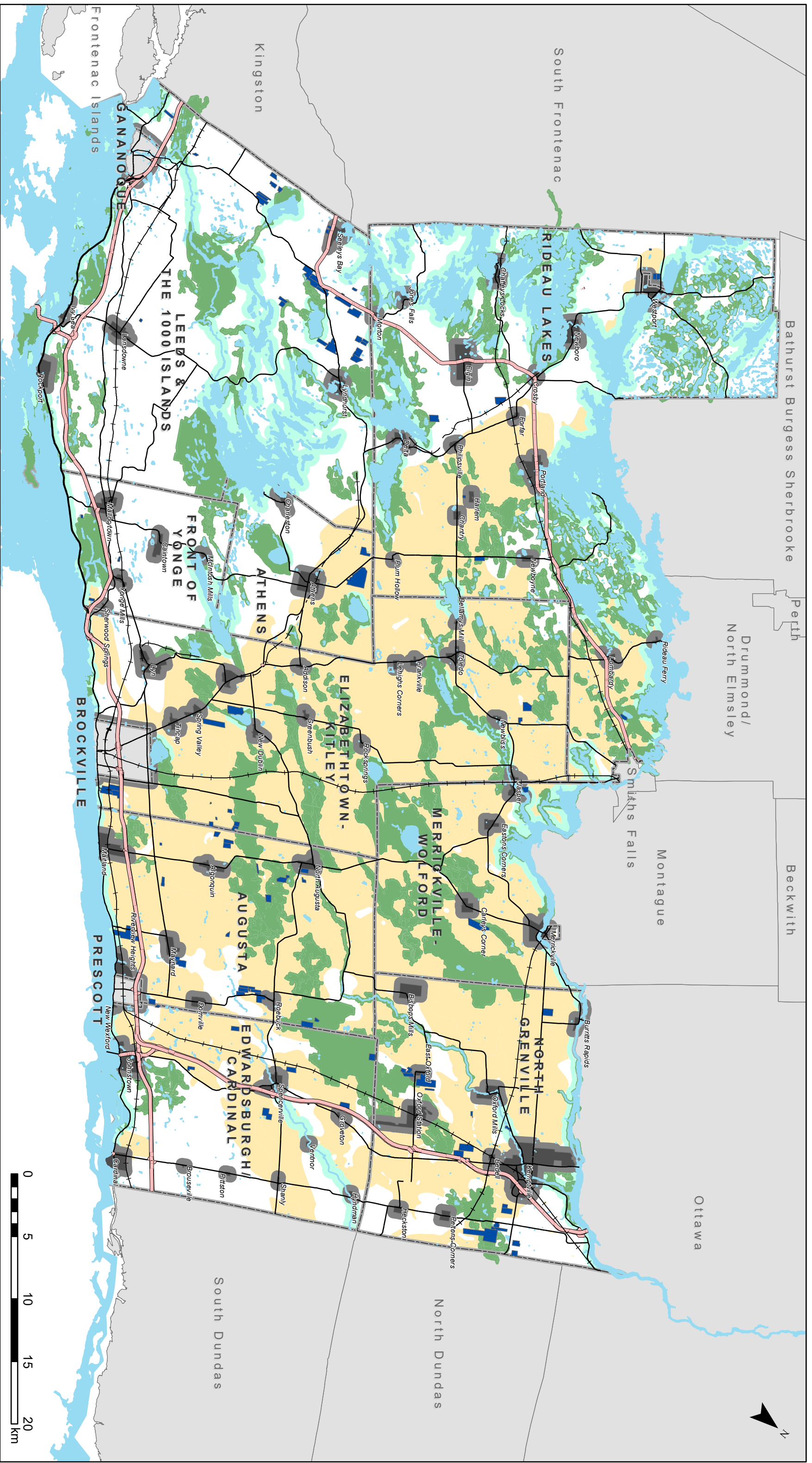
Lastly, the Counties OP also includes **Section 3.5.2.2** that includes policies that apply to rehabilitation. In this regard, it is recommended that this section be retained as is in the current Counties OP.

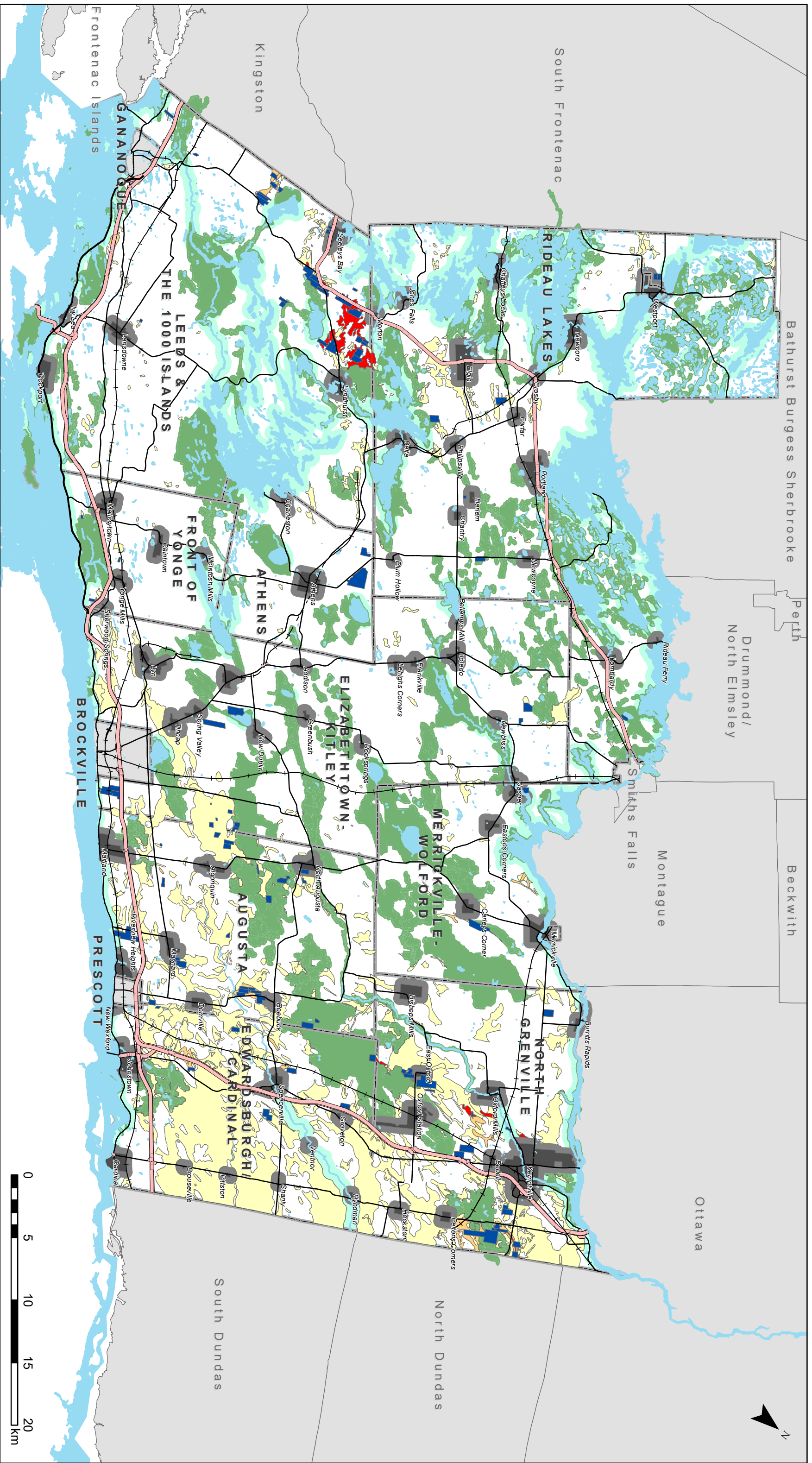
**8.4 Mapping (Screening Tool)**

The purpose of this section of the ARMP is to provide direction on mapping updates required to identify Selected Sand and Gravel and Bedrock Resource Areas in the Counties OP.

**Section 5** of this ARMP reviewed the local Official Plans and their policy approach that applies to mineral aggregate resources as well as their approach to mapping mineral aggregate resources.

On the basis of the above, several of the local Official Plans identified resource areas as a layer on a constraints schedule in their Official Plan. In this regard, is recommended that Selected Sand and Gravel and Bedrock Resource Areas be identified on a map in the Counties OP as a Potential Development Constraint Overlay.





**United Counties of Leeds and Grenville  
Mineral Aggregate Resource Study  
Sand and Gravel Constraints**

**Mineral Aggregate Resource Constraints**

- Primary
- Secondary
- Tertiary
- Pit/Quarry
- PSW/ANSI including 120 metre buffer
- Settlement Area
- Settlement Area 500m Buffer
- Lake/River
- Lake/River 500m Buffer

**Mineral Aggregate Resource Constraints**

Resource	Total (ha)	Remaining (ha)
Primary	1266	1034
Secondary	1664	1295
Tertiary	4897	34178

