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DATE 22 April 1996  
  
TO/DEST. The Chair and Members of Regional Council  
  
FROM/EXP. Commissioner, Planning and Property  
  
SUBJECT/OBJET **MINERAL RESOURCE STUDY**

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Attached is a summary of the Mineral Resource Study, done for the Planning and Property Department by MacNaughton Hermesen Britton Clarkson Planning Limited.

It is important to note that this is an interim product, **not** a final recommendation of Mineral Resource Areas to be protected. Three additional steps are needed:

- 1) Further analysis of property fragmentation and conflicts with existing development (pending availability of Assessment property information on the Geographic Information System);
- 2) Weighing of Mineral Resource value against other planning objectives in areas of overlap (e.g. Agricultural Resource, Natural Environmental System);
- 3) Public consultation, which will be done through a rural consultation program on all issues affecting the rural area.

We expect to issue an addendum with a revised map when the property fragmentation and development conflict step has been completed.

If you would like a copy of the full report (Vol. 1 Final Report; Vol. 2 Appendices), please contact Christiane Danis at ext. 1600. If you have questions or comments concerning the study, please contact Carol Christensen at ext. 1610.

*Approved by N. Tunnacliffe*

N. Tunnacliffe, MCIP, RPP

Attach. ( 1 )

Information Previously Distributed  
To be listed on Planning and Environment  
Committee Agenda 14 May 96

# **Mineral Resource Study**

**OF THE  
REGIONAL MUNICIPALITY  
OF OTTAWA-CARLETON**

## **Summary Report**

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*Prepared by:*

*MacNaughton Hermesen Britton Clarkson Planning Limited*

*in association with*

*Gorrell Resource Investigations  
A.J. Robinson and Associates  
Smith Consultants*

## **A NOTE TO THE READER**

This report presents the consultants' conclusions as of December 1995, but does **not** represent a final recommendation for the designation of Mineral Resource Areas in the Regional Official Plan currently under review.

Three additional steps are required, prior to a staff recommendation:

- 1) Further analysis of property fragmentation and conflicts with existing development (pending availability of Assessment property information on the Region's Geographic Information System);
- 2) Weighing of Mineral Resource value against other planning objectives in areas of overlap (e.g. Agricultural Resource, Natural Environmental System);
- 3) Public consultation, which will be done through a rural consultation program on all issues affecting the rural area.

An addendum to the report with a revised map will be issued when the property fragmentation and development conflict step has been completed.

**MINERAL RESOURCE STUDY**  
**SUMMARY REPORT**  
**December 1995**  
**Prepared for the Regional Municipality of Ottawa Carleton**

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## **INTRODUCTION**

The Regional Municipality of Ottawa-Carleton (RMO) has significant and extensive limestone resources located within its boundaries. These resources are well located relative to high demand urban and suburban areas. The reserves of unconsolidated sand and gravel in RMO are limited. Special attention is required to ensure that the remaining high quality sand and gravel deposits are protected from incompatible uses. It is essential that long range planning strive to maintain and protect existing aggregate supplies, while at the same time reducing the potential for conflict between various land uses.

The current RMO Official Plan policies were developed following a 1982 Mineral Resource Policy Study. These Official Plan policies intended that the mineral aggregate policies be reviewed 10 years after their adoption so that consideration could be given as to whether additional areas should be designated "Mineral Resource Areas".

The objectives of this 1995 Mineral Resource Study are to review existing Plan policies relative to Provincial policy and legislation, and develop strategies for the protection of the Region's mineral resources. The Study provides both resource mapping illustrating deposit areas recommended for inclusion in the Official Plan, and recommended policies. The Mineral Resource Study (initiated 1993) was based on the January 1993 Aggregate Assessment of the Regional Municipality of Ottawa Carleton (Gorrell Resource Investigations - Report No. 913200).

## **POLICY AND LEGISLATION**

Aggregates and other mineral resources are non-renewable resources which are essential to our economic well being. Our roads, sidewalks, bridges, sewer lines, schools, homes, factories and offices all depend on aggregate. In Ontario, over 50% of aggregate is purchased by Provincial, Regional and municipal governments for road construction. Approximately 60% of the total cost of aggregate to the consumer is for truck transportation.

The requirement for aggregate availability close to market locations and at reasonable costs led to the development and adoption of the Provincial Mineral Aggregate Resources Policy Statement in 1986. The Policy (MARPS) requires all planning jurisdictions to consider the implications of their actions on the availability of mineral aggregate resources to meet future local, regional and Provincial needs. Further, it requires that jurisdictions identify and protect as much of their mineral aggregate resources as is practical and realistically possible, in the context of other land use planning objectives. Planning jurisdictions must also provide a clear and reasonable mechanism to permit the establishment or expansion of pits and quarries.

In addition to MARPS, which guides planning policy and decision making, the Province has established legislation to regulate pits and quarries in designated portions of the Province (most of Southern Ontario). The Aggregate Resources Act controls and regulates aggregate operations and requires the progressive rehabilitation of pits and quarries. Through a licensing and regulatory system, the Act strives to minimize adverse impacts on the environment resulting from pit and quarry operations.

## **ECONOMIC FACTORS**

The demand for aggregates in RMOC is currently met almost entirely from production within the Region's boundaries. The exception is good quality sand, which is in short supply. Over the longterm, the Region's average annual consumption of aggregates will increase, but the rate of increase will be slower than in the past. Within the Region, consumption increasingly is skewed away from the downtown core, and toward the suburban and fringe areas.

## **METHODOLOGY AND EVALUATION CRITERIA**

The Mineral Resource Study developed and applied a variety of Evaluation Criteria in order to select deposit areas for identification and protection through a designation in the Regional Official Plan. This was accomplished using a staged and progressive approach that took into account geologic, social, natural resource, economic and environmental factors. The resulting Potential Aggregate Resource Areas Mapping is included in the Final Report. The map shows the deposit areas that remain after the application and consideration of the evaluation criteria established in the Study.

The Evaluation Criteria considered through the Mineral Resource Study are listed below. First level constraints included criteria that were clearly overriding and for which data readily available. The second level constraints were developed and applied in consultation with provincial agencies, Conservation Authorities, local municipalities, industry and public groups.

### **First Level Constraints**

- Class 4 sand and gravel
- Verulam (Formation 8) usable bedrock
- Class 1-3 wetlands (provincially significant)
- Areas of Natural and Scientific Interest (ANSIs)
- Urban Areas (current Regional Official Plan designation)
- River Corridors (current Regional Official Plan designation)
- Villages (local Official Plan)
- Existing, registered and draft approved Rural subdivisions
- Natural Environment Areas (current Regional Official Plan designation)
- Marginal Resource Areas (restricted) (current Regional Official Plan designation)

### **Second Level Constraints**

- Existing Aggregate Resources Act licenses.
- Size of deposit area (most sand and gravel deposits of less than 25 acres and bedrock deposits of less than 50 acres were excluded).
- Proximity to registered and draft approved subdivisions.
- Relative importance of aggregate deposit.
- Proximity to market.
- Density of non-subdivision rural development (based on information provided by local municipalities which varied in availability and level of detail by municipality).
- Agricultural resources and soil capability (based on previously developed decision making framework).
- Project team, MNR and Regional staff knowledge of deposit areas and surrounding land use.
- Corrections to reflect intended First Level Constraints including removal of additional River Corridor designation and addition of deposits under pending subdivision applications.

The results and recommendations of this Study are to be considered as part of the ongoing Regional Official Plan Review. This will include further analysis of the Potential Aggregate Resource Areas Mapping relative to the Natural Environment Systems Strategy Work and other local planning objectives and may lead to further reductions in the Potential Aggregate Resource Areas recommended for protection or policy requirements for rehabilitation and enhancement of natural areas following extraction.

## **POLICY OBJECTIVES AND RECOMMENDATIONS**

<b>Policy Objective A:</b>	<b>To identify and protect legally existing pits and quarries. (MARPS</b>
<b>Resource Areas</b>	<b>2.1, 3.1)</b>

Legally existing pits and quarries are licensed under the Aggregate Resources Act. It is recommended that these operations be identified on the Official Plan Land Use Schedule. These licensed pits and quarries will be protected from incompatible land uses and their continued operation is permitted. Local Official Plans and Zoning By-laws would also be required to meet this policy objective by designating existing licensed pits and quarries on the land use schedule and including them in an appropriate zoning category.

<b>Policy Objective B:</b>	<b>To identify and protect as much of the Region's Mineral Aggregate</b>
<b>Resource Areas</b>	<b>Resources as is practicable in the context of other land use policy</b>
	<b>objectives. (MARPS 1.2, 2.2, 2.3)</b>

The mineral aggregate deposit areas identified in this Study are recommended for identification and protection in the Region's Official Plan, through designation on the Land Use Schedule. Permitted uses in the Mineral Resource Areas will be limited so that existing or future extraction is not constrained or restricted. New residential uses would not be permitted on or adjacent to Mineral Resource Areas, and the policies require careful consideration of the implications to aggregate availability when reviewing non-aggregate land uses in such locations.

<b>Policy Objective C:</b>	<b>To provide a clear and reasonable mechanism to permit the</b>
<b>New or expanded</b>	<b>establishment or expansion of pits and quarries. (MARPS 2.4).</b>
<b>Pits and Quarries</b>	

It is recommended that the Regional Official Plan incorporate policies outlining the approval framework that would apply to applications for new pits and quarries. These policies will specify what approvals are required and what information requirements and criteria will be used to assess new applications.

<b>Policy Objective D: Waysides</b>	<b>Permit wayside pits and quarries without requiring an amendment to the Plan or Zoning By-Law. (MARPS 2.5 and 3.3.)</b>
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Wayside pits or quarries are temporary operations opened and used by public road authorities for the purposes of a particular contract, usually involving road construction. Wayside pits and quarries are often required on short notice. The Provincial Policy requirement is to permit wayside pits or quarries without amendment to Official Plans or local Zoning By-laws. Exceptions are provided for areas of existing development or particular environmental sensitivity.

<b>Policy Objective E: Related Uses</b>	<b>Permit appropriate aggregate related uses in Mineral Resource Areas subject to municipal zoning control and appropriate environmental considerations.</b>
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The Regional Official Plan will include policies dealing with aggregate related uses that are appropriately located in pit and quarry sites. Examples include asphalt and concrete batching plants and aggregate related recycling activities and facilities. Local municipalities may consider separate zoning categories and controls for such uses. Temporary/portable asphalt plants for public road construction projects are permitted without the requirement for local rezoning.

<b>Policy Objective F: Rehabilitation</b>	<b>Recognize extraction as an interim land use and provide guidance for afteruses of rehabilitated pits and quarries. (MARPS 2.6)</b>
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Aggregate extraction is an interim land use. The Aggregate Resources Act requires progressive rehabilitation of licensed pits and quarries. The role of the Region and local municipalities is to provide general afteruse direction and encourage the concept of extraction as an interim land use. Special policy recommendations are included to address the situation where extraction of aggregate resources is proposed on high quality agricultural land. In these situations, agriculture rehabilitation must be carried out except where, within a designated Mineral Resource Area, extraction below the water table or deep quarrying make agricultural rehabilitation impossible. Redevelopment of depleted and rehabilitated sites will only occur with full and proper consideration of appropriate Provincial, regional and local planning requirements.



**Policy Objective G:      Provide policies appropriate for the management of other "non-aggregate" mineral resources.**

No specific identification policies for clay resources or dimension stone are recommended. Other policy objectives apply equally to the extraction of clay and dimension stone. A known silica deposit south of Dunrobin (City of Kanata) should be protected by Official Plan policies.

## CONCLUSIONS

The Mineral Resource Study provides the basis for new Regional Official Plan policy and mapping. Identifying and protecting realistic long term resource areas is the first step in reducing the potential for conflict between land uses. An integrated approach, considering geologic, social, economic and environmental factors was used to delineate the Potential Aggregate Resource Areas. The mapping contained in Section 8 of this Report represents realistic reserve areas where aggregate extraction is likely to be given consideration in the future. This mapping is to be refined through the ongoing Regional Plan Review. The Potential Aggregate Resource Areas (as refined) are recommended for identification and protection through an Official Plan designation. The recommendations have adopted a long term perspective that is necessary when dealing with essential non-renewable resources.

This approach, in combination with an Official Plan designation and supporting policy provides strong protection for the Region's aggregate resources. This positive and upfront policy framework provides a degree of certainty which should benefit decision makers, planning staff, the industry and the general public including rural landowners.

Complete copies of the Mineral Resource Study Final Report including technical appendices and mapping can be obtained from the Regional Municipality of Ottawa Carleton Planning Department. (Cartier Square, 111 Lisgar Street, Ottawa, Ontario, K2P 2L7, Telephone (613) 560-2053, Facsimile (613) 560-6006).

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