



APPENDIX TSD#1-E

Land Use & Socio-Economic Component

February 2013

Land Use & Socio-Economic Component
Appendix TSD#1-E

**COMPARATIVE EVALUATION OF
ALTERNATIVE SITES**



Table of Contents

INTRODUCTION..... 1

1.0 ASSESSMENT CRITERIA, INDICATORS AND DATA SOURCES 1

2.0 PRELIMINARY DESCRIPTION OF EXISTING ENVIRONMENT 2

 2.1 North Russell Road Site 2

 2.2 Boundary Road Site 13

3.0 SITE COMPARISON – LAND USE & SOCIO-ECONOMIC 21

 3.1 Comparison of Sites 21

 3.1.1 Current and Planned Future Land Use 21

 3.1.2 Mineral Aggregate Resources..... 22

 3.2 Results of Site Comparison 22

REFERENCES..... 23

TABLES

Table 2.1-1: Summary of NRR Site Considerations 12

Table 2.2-1: Summary of BR Site Considerations..... 21

FIGURES

Figure 2.1-1: United Counties of Prescott and Russell Official Plan 2006-25 – Schedule A 4

Figure 2.1-2 United Counties of Prescott and Russell Official Plan 2006-25 - Schedule D..... 8

Figure 2.1-3: Russell Township Zoning By-law, 2011 10

Figure 2.2-1: City of Ottawa Official Plan 2003-203 Schedule A..... 14

Figure 2.2-2: City of Ottawa Official Plan 2003-203 Schedule G 16

Figure 2.2-3: City of Ottawa 2003-203 - Distance from Subject Site to Village and City Boundary (kilometres) 18

Figure 2.2-4: City of Ottawa Official Plan 2003-203 - Schedule K..... 18

Figure 2.2-5: City of Ottawa Official Plan 2003-203 - Schedule L1 19

Figure 2.2-6: City of Ottawa Zoning By-law 2008-250..... 20

INTRODUCTION

Two properties that are owned or have been optioned by Taggart Miller have been identified for the proposed Capital Region Resource Recovery Centre (CRRRC) (the Alternative Sites). The Alternative Sites are described below:

- **North Russell Road Site (NRR Site)** – located in the northwest part of the Township of Russell about three kilometres east of the boundary with the City of Ottawa, and about five kilometres south of Provincial Highway 417 between the Boundary Road and Vars exits. The property consists of about 193 hectares (476 acres) of contiguous lands on Part of Lots 18 and 19, Concessions III and IV, Township of Russell.
- **Boundary Road Site (BR Site)** – located in the east part of the City of Ottawa, in the former Township of Cumberland and just southeast of the Highway 417/Boundary Road interchange. The property is on the east side of Boundary Road, east of an existing industrial park, north of Devine Road and west of Frontier Road. The property consists of about 175 hectares (430 acres) of land on Lots 23 to 25, Concession XI, Township of Cumberland.

The CRRRC is proposed to provide facilities and capacity for recovery of resources and diversion of material from disposal generated by the industrial, commercial and institutional (IC&I) and construction and demolition (C&D) sectors primarily in Ottawa and secondarily a portion of eastern Ontario, for management and utilization of surplus and contaminated soils, as well as landfill disposal capacity for material that is not diverted.

1.0 ASSESSMENT CRITERIA, INDICATORS AND DATA SOURCES

The land use & socio-economic component compared the Alternative Sites using the following criteria:

- Which Site is more compatible with current and proposed planned future land uses in the Site-vicinity?
- Which Site is preferred for the protection of mineral aggregate resources?

The indicators for the first criterion are:

- Current land use within 1,000 metres of the Site; and
- Certain and probable planned future land use within 1,000 metres of the Site.

The indicator for the second criterion is:

- Known and probable type and quality of mineral aggregate resources on Site and within 500 metres.

The data sources used for the first criterion were aerial photographic and topographic mapping and field reconnaissance, published data on public recreational facilities/activities, Provincial Policy Statement, 2005 and ongoing review, Eastern Ontario Smart Growth Panel recommendations, discussions with municipality and institutions and Municipal Official Plans and Zoning. The data sources used for the second criterion were published reports (i.e., Ministry of Natural Resources (MNR), Ontario Geologic Survey (OGS), Ministry of Northern Development and Mines (MNDM) Aggregate Resources Inventory Papers (ARIPs)), existing quarry aggregate license, Municipal Official Plans and Zoning and findings of on-Site investigations completed for this project or otherwise available.

2.0 PRELIMINARY DESCRIPTION OF EXISTING ENVIRONMENT

The following sections describe the existing conditions for the land use & socio-economic component at each of the Alternative Sites based on the preliminary investigations and assessments.

2.1 North Russell Road Site

The NRR Site is located within the Township of Russell, which is a part of the United Counties of Prescott and Russell (UCPR). The land use planning policy is determined by the Official Plan (OP) of the United Counties. The Township has policy for only the Villages, not the rural area. The Zoning By-law for the lands is approved by the Township of Russell.

There is limited residential development in the study area and a single institutional use, being the cemetery on North Russell Road, identified within 1,000 metres of the site.

Provincial Policy Statement (PPS), 2005

The PPS provides the Provincial Objectives for land use in the province. The Province is currently undertaking a review of the PPS and released a first draft for comment in late 2012. It is unknown when this review will be complete, but if an application(s) is filed after the review is complete then the new policies would apply to the approval of the application(s).

The relevant policies that deal with Resources in the PPS include both Agricultural and Aggregates. Neither of the two is given primacy over the other, but it is the province's goal to protect both for the long term.

Planning policies for Agricultural lands are addressed in Section 2.3 of the PPS. Prime Agricultural Land is defined by the PPS as land that includes specialty crop areas and/or Canada Land Inventory Classes 1, 2 and 3 soils, in this order of priority for protection. Prime agricultural areas are areas where prime agricultural lands predominate.

The Provincial mandate for prime agricultural areas is that they shall be protected for long-term use for agriculture. Specialty crop areas shall be given the highest priority for protection, followed by Classes 1, 2 and 3 soils, in this order of priority.

Permitted Uses within prime agricultural areas are agricultural uses, secondary uses and agriculture-related uses. In prime agricultural areas, all types, sizes and intensities of agricultural uses and normal farm practices shall be promoted and protected in accordance with provincial standards.

Planning authorities may only exclude land from prime agricultural areas for expansions identified for settlement areas; extraction of minerals, petroleum resources and mineral aggregate resources; and limited non-residential uses are only allowed under strict conditions.

The PPS also states that impacts from any new or expanding non-agricultural uses on surrounding agricultural operations and lands should also be mitigated to the extent feasible.

Any proposal to amend the lands designated Agricultural under the UCPR OP to permit a use that is not considered as agricultural will have to be evaluated against the potential of the land to serve the long term needs of both the Province and the community for agricultural purposes. Any such application will have to be supported by agricultural technical studies that could include soil analysis, a review of existing uses that limit the

potential for long-term use of the land for agriculture and a comprehensive planning analysis that examines the change to the new use.

Planning policies for Mineral Aggregate Resources are addressed in Section 2.5 of the PPS. Mineral Aggregate Resources are defined as 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 material prescribed under the *Mining Act*.

The Provincial mandate for mineral aggregate resources is that they shall be protected for long-term use. 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.

In areas adjacent to or in known deposits of mineral aggregate resources, 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.

To rezone the NRR Site, there will also have to be an analysis of the potential impact upon the aggregate resource. This would include a planning rationale as to the impacts upon the uses for shale in the area, along with supporting analysis from engineering specialists about the shale and its role in the Provincial and community context.

Shape the Future: Eastern Ontario Smart Growth Panel, 2003

In 2002, the government appointed a Smart Growth Panel for eastern Ontario to develop recommendations for bringing growth and prosperity to eastern Ontario.

When the Eastern Panel was established, the Minister of Municipal Affairs and Housing challenged panel members to think creatively and to come up with a bold new strategy to guide eastern Ontario's growth over the next 30 years.

In Section 2 of the Panel's final report, recommendations were made for enhancing environmental stewardship. Section 2.3 dealt with waste management where they noted:

"The panel has recognized that waste management is a significant issue now and will continue to be in the future. Disposing of waste has become a costly exercise, financially and environmentally. Co-operation among provincial and municipal governments, and stakeholders must exist in order to develop a more comprehensive, integrated waste management plan for the zone. Eastern Ontario must strive to embrace alternative technologies, and the re-use and reduction of waste when considering waste disposal."

The proposed CRRRC would be a step in assisting eastern Ontario to deliver on the Panel's recommendations.

United Counties of Prescott and Russell Official Plan 1999

The OP for the UCPR was adopted in 1999 and was last updated in June 2006. That update did not affect the subject lands.

The lands that are presently licensed as a quarry are designated as Aggregate Extraction, while the balance of the lands are designated as Agricultural Resource as shown in Figure 2.1-1. The general Background information used to develop the UCPR OP identifies the western portion of the site land as Class 1 for agriculture, and the eastern portion as Class 2 according to the published information from the Canada Land Inventory for Soils. A preliminary Site-specific evaluation of the soil capability on the NRR Site in Appendix TSD#1-G provides information that identifies the actual soil capability as Class 3 and 4.

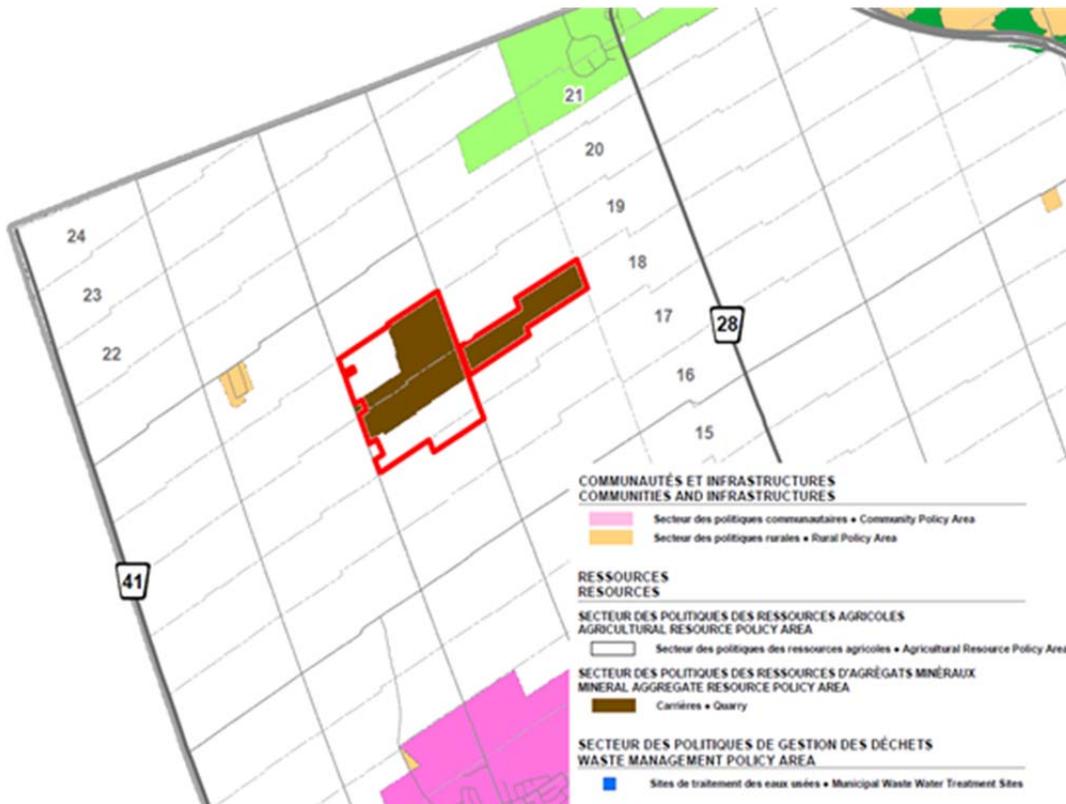


Figure 2.1-1: United Counties of Prescott and Russell Official Plan 2006-25 – Schedule A

The UCPR are presently completing a study regarding the Aggregate Resources within the Township. The draft report is expected to be released in February or March of 2013. Through discussions with Counties and Township staff, they have identified that no changes to the Mineral Aggregate Resource Policy Area are expected around the subject lands.

The Township is also presently undertaking a review of its policy for the development of the Villages. The Village of Russell is south of the NRR Site. The conclusion of the draft report on growth is that there are no needs for additional residential lands, but there are some needs to ensure the supply of recreational and employment lands. It is proposed that this be provided by expansion of the Village boundaries with the addition

of Commercial lands to the east of Russell towards Embrun. These lands are currently designated as 'Rural' within the UCPR OP.

The Township has entered into an agreement with the City of Ottawa to purchase water to supply the villages of Russell, Embrun and Marionville. This water supply extends from the urban area of the City of Ottawa to the Russell Reservoir. The feeder main extends along Eadie Road, which runs between the west and east portions of the NRR Site. This water is not considered potable until it is treated at the reservoir; therefore it is not expected that this water supply would be available to the NRR Site.

Changes to the OP of the UCPR would be required to redevelop the NRR Site lands. When evaluating the opportunities and constraints associated with changes to the OP, it is necessary to examine the Provincial Policy Statement (PPS) of 2005 to ensure changes are consistent with Provincial Policy.

Agricultural Resource Policy Area

Section 4.2 of the UCPR OP outlines the development policies for lands designated Agricultural Resource Policy Area. The intent of this designation is to promote agricultural uses and to control non-agricultural uses.

The following uses are permitted in the Agricultural Resource Policy Area:

- 1) Agricultural uses and normal farm practices. Agricultural uses means crop cultivation, including nursery and horticultural crops; raising of livestock (including dairy or beef cattle, poultry, swine, sheep, fish and non-traditional livestock such as deer, bison, emu, pheasant etc.); raising of other animals for food, fur or fibre, including poultry and fish; aquaculture, apiaries, agroforestry, orchards, maple syrup production, and associated on-farm buildings and structures;
- 2) Uses which are secondary to a principal agricultural use and which add value to agricultural products or support the agricultural resource use;
- 3) Uses secondary to the principal use of the property such as home-based work, bed and breakfast establishments, domestic industries and uses that produce agricultural products;
- 4) Forestry;
- 5) Uses related to the conservation or management of the natural environment;
- 6) Small scale industrial and commercial uses that are directly related to agriculture which of necessity must locate close to farm operations, including such uses as livestock assembly points, grain drying, storage for farm produce, and custom machinery operators. Wherever possible, these uses shall be located on land that is of low capability for agriculture. Furthermore they shall not adversely affect agricultural operations in the general vicinity;
- 7) Wayside pits and quarries which, if established on land that is of high capability for agriculture, shall be subject to a rehabilitation plan showing how the site will be rehabilitated for productive agricultural use;
- 8) Public utility corridors and communications facilities;
- 9) Private communications facilities subject to local zoning and development controls;
- 10) Wind and or solar energy facilities; and
- 11) Limited Residential development.

Mineral Aggregate Resource Policy Area

Section 4.3 of the UCPR OP outlines the development policies for lands designated Mineral Aggregate Resource Policy Area. The intent of this designation is to protect existing extraction operations as the primary source of future supplies.

The following uses are permitted in the Mineral Aggregate Resource Policy Area:

- 1) Pits and quarries;
- 2) Wayside pits and quarries;
- 3) Portable asphalt plants and concrete plants;
- 4) Agricultural uses excluding any accessory building or structure;
- 5) Forestry uses excluding any accessory building or structure;
- 6) Conservation and natural resource management uses excluding any accessory building or structure; and
- 7) Uses accessory to an aggregate extraction operation such as crushing and screening operations, machinery storage facilities and office space.

Development, including changes in land use and the creation of new lots for residential, commercial, institutional, recreational or industrial development that 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.

Waste Management Policy Area

The UCPR OP also has specific policies in Section 3.5 which deal with Waste Management Policy Areas. The UCPR will require an Official Plan Amendment (OPA) for the establishment of any new Solid Waste Disposal Site. Policies for the development of a Waste Management Site include:

- 1) Development shall be reviewed to ensure that appropriate solid waste disposal services can be provided in a manner which is consistent with environmental considerations;
- 2) Waste water and solid waste disposal sites are identified as Waste Management Policy Area on Schedule A. The establishment of new sites or the enlargement of existing sites shall be in accordance with Ministry of the Environment guidelines and regulations and shall require an amendment to the OP;
- 3) Waste water and solid waste disposal sites shall be appropriately zoned in local zoning by-laws;
- 4) Uses permitted in individual Waste Management Policy Area designations shall be in accordance with the individual Certificate of Approval issued by the Ministry of the Environment and the local municipal Zoning By-law;
- 5) Waste water and solid waste disposal sites may be managed by the local municipality or may be transferred to the upper tier without amendment to this Plan; and

- 6) Septage disposal sites (i.e., sites required for the disposal of waste removed from private septic systems, holding tanks and similar facilities) shall require an amendment to this OP. The amendment shall be justified and supported by appropriate environmental studies in accordance with the guidelines of the Ministry of the Environment's (MOE) permit process. Where OPAs are granted, such sites shall be appropriately zoned and must operate in accordance with a MOE license. The location of septage disposal sites shall generally be a minimum of 500 metres from any adjacent residential, institutional or commercial use and development of the site shall be subject to site plan control. There is one septage disposal site in the United Counties. It is located in part of Lot 18, Concession XIV in the former Township of South Plantagenet, now part of Nation Municipality. It is identified on Schedule A as a Waste Disposal Site and the use is permitted in accordance with MOE Certificate of Authorization No. KG-97-008.

Development within 500 metres (or less where approved in a secondary plan or local OP) of existing waste water or solid waste management sites shall generally be discouraged unless supported by an appropriate study or studies which confirm that there will be no negative impacts on the proposed development related to the adjacent waste water or waste disposal site.

Local zoning by-laws shall zone adjacent lands appropriately, prohibiting new incompatible uses which cannot be reasonably mitigated.

It is clear that the UCPR has strong policies related to the preservation of Agricultural lands. The NRR Site itself is a large area, and it is within an even larger area of agriculturally designated lands. The aggregate is also identified and the UCPR does recognize that there is an opportunity to amend the OP when a licence is surrendered. This does provide for an opportunity to examine the appropriate land use for the future, in a localized context.

A change in Official Plan Designation would be required for the redevelopment of these lands. The context of this change would be evaluated against the:

- Resources;
- Appropriateness of the new use against the agricultural land base;
- Remaining aggregate; and
- With respect to community impact.

Transportation

The NRR Site is located along both a local road and a local collector as shown in Figure 2.1-2. Section 3.3.6 of the UCPR OP outlines that access to local collectors shall generally be minimized in order to ensure that the main function of the roadway as an efficient transportation artery is maintained.

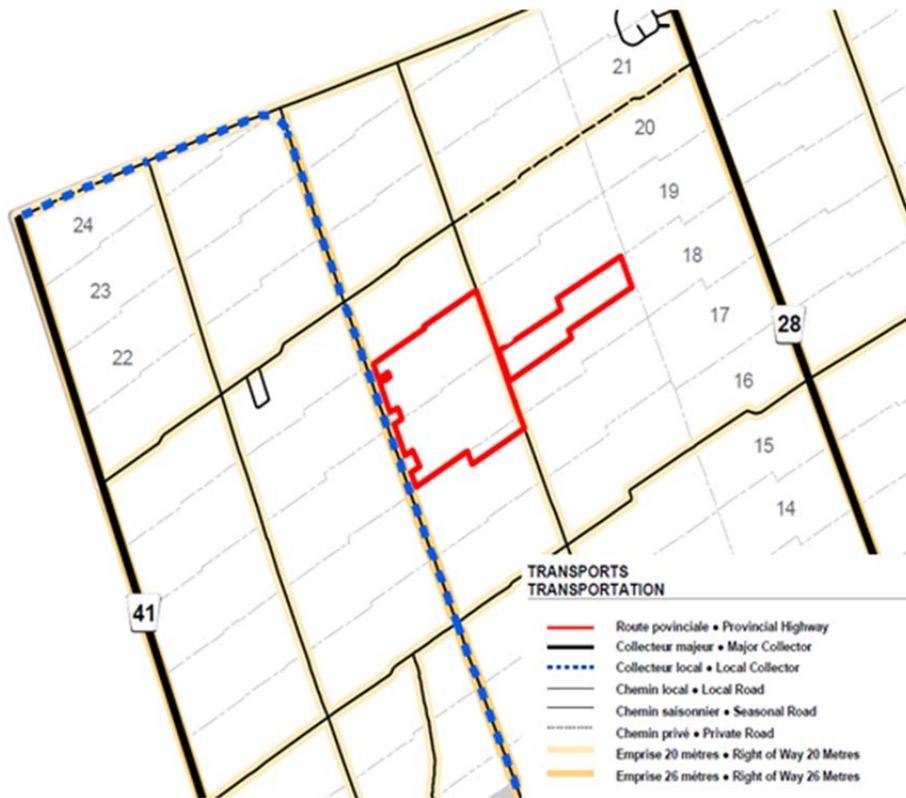


Figure 2.1-2 United Counties of Prescott and Russell Official Plan 2006-25 - Schedule D

Any use changes will have to be evaluated against these issues in order to substantiate a change to the policies. In addition, noise, traffic and similar topics with potential for impact will also have to be evaluated.

Groundwater

Section 5.5.8 of the UCPR OP outlines policy for groundwater protection and enhancement. It is the intent of the UCPR OP policies related to groundwater to consider the impact of development and land use on groundwater in order to ensure the long term viability of this resource.

The following policies shall apply:

- 1) The United Counties of Prescott and Russell will work in partnership with senior and local levels of government, environmental agencies and the private sector to develop a water resources data base which identifies sensitive groundwater recharge areas, sensitive hydro-geological areas and areas with known groundwater quality and quantity constraints.
- 2) Council will proceed with an amendment to this OP in order to implement site specific groundwater protection or improvement land use policies based on the detailed data base developed through the implementation of policy 3.3.8.2 (1)1 above and will identify these areas as Natural Heritage Policy Area on Schedule B.

- 3) The United Counties of Prescott and Russell will work in partnership with senior and local levels of government, environmental agencies and the private sector to enforce provincial regulations on private septic field and water well construction.
- 4) Industrial or commercial developments which require large amounts of groundwater will be required to undertake a hydrogeology study conducted by qualified hydrogeology engineers which addresses the impact of the proposed development on the quantity and quality of the water supply for existing development in the general area of the development site.
- 5) New commercial and/or industrial operations which take and bottle water for commercial purposes are prohibited. Existing operations are recognized as legal non-conforming uses. Any expansion of such operations will require an amendment to this Plan.
- 6) The United Counties of Prescott and Russell will work in partnership with senior and local levels of government and environmental agencies to develop an education program aimed at reducing groundwater consumption and pollution.

Discussions with UCPR

Through discussion with Mr. Louis Prévost, the Director of Planning with the UCPR, it was determined that UCPR are scheduled to release in February – March 2013 an Aggregate Resources Review that has been underway for the past few years. He stated that no changes to the aggregate boundary are expected to be modified on the NRR Site or surrounding area. The recommendations of this report will be incorporated into the UCPR OP five-year review which is expected to start public meetings in late spring or early summer 2013.

The UCPR is not currently planning any review of their agricultural lands or policies.

Mr. Prévost also stated the Counties' intention to add additional Commercial lands to the east of Russell towards Embrun. These lands are currently designated as 'Rural' within the UCPR.

The UCPR has no intention to designate additional Trade and Industry Lands through its review.

There are no significant designation changes expected surrounding the NRR Site during the five-year review. A few individual land owners on currently designated agricultural lands have requested their property be changed to rural.

Russell Township Zoning By-law, 46-2011

The subject lands are currently zoned Mineral Aggregate-Quarry (MAQ), General Agricultural (A2), General Agricultural Special Exception 52 (A2-52) and General Agricultural Special Exception 63 (A2-63) in the Russell Township Zoning By-law 2011, as shown in Figure 2.1-3. Development of the NRR Site lands will require amendments to this By-law.

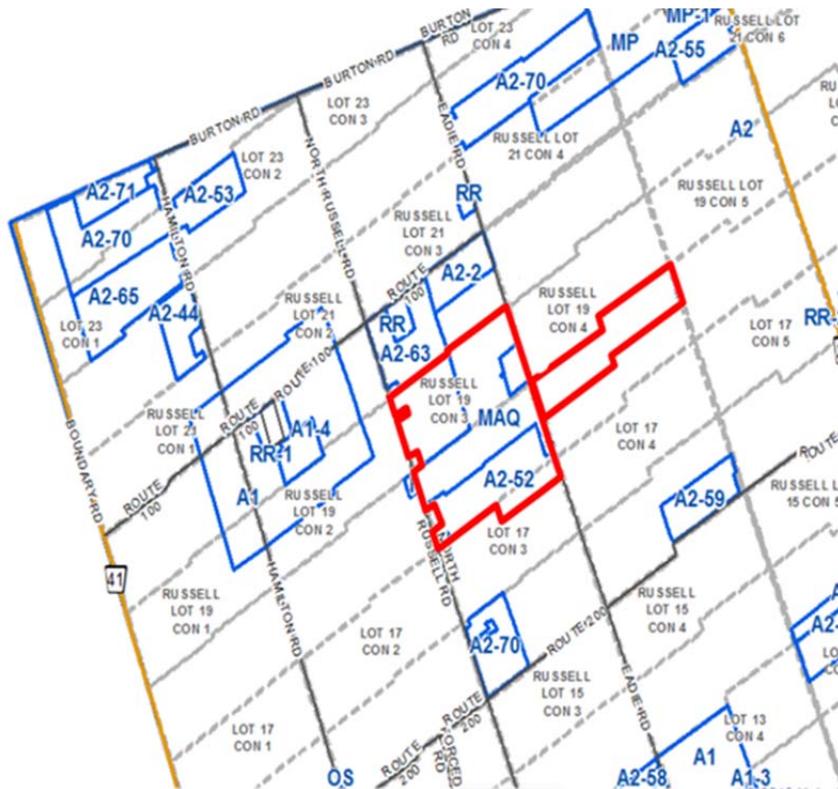


Figure 2.1-3: Russell Township Zoning By-law, 2011

Discussions with Township Staff

Through discussion with Ms. Dominique Tremblay, Planning Director with Russell Township, it was determined that no zoning or site plan applications have been applied for, or are active in January of 2013, with the Township in the Site-vicinity of the NRR Site.

Four building permits have been issued in the area surrounding the NRR Site, three south of the Site and one to the north. Two of the permits are for new residential dwellings: one is to replace a dwelling and garage destroyed by fire and one is to build a farm structure.

Aggregate Resources

The central and eastern portions of the NRR Site consist of a quarry with a Class A license #5881 (quarry below the water table) licensed under the Aggregate Resources Act (ARA) for the extraction of Queenston Formation shale. The extracted shale has been used in the manufacture of brick. The Official Plan of the UCPR designates this licensed quarry as Aggregate Extraction. The 110 ha licensed quarry has been operated since around the turn of the 19th century until 2006 when Hanson Brick, the owner of the quarry and an off-site brick manufacturing plant in Ottawa, closed up their Ottawa area operations and consolidated their operations at their southern Ontario facility. The existing quarry occupies a footprint of about 15 ha; it is estimated that about 1 million cubic metres of shale has been extracted.

In Ontario, brick manufacturing is predominantly carried out at two major facilities in southern Ontario by Hanson Canada Brick and Brampton Brick. These are located closer to the much larger deposits of Queenston shale in the province, and close to the major markets for manufactured brick, the two key economic factors in this business. It is understood (personal communication) that Hanson Brick decided to close their business in eastern Ontario because it was no longer economically viable. In addition to being farther from major markets, it is further understood (personal communication) that the chemical-physical properties of the Queenston Shale in Russell Township are less favourable than those of the Queenston Formation in southern Ontario, making the manufacture of brick comparatively more expensive.

The Clay and Shale Industry of Ontario (Guillet and Joyce, 1987) provides an overview of Queenston Shale deposits in Ontario, as well as their general uses. The report shows that the majority of the Queenston shale deposits are present in the Toronto-Hamilton area. Assuming a shale thickness of 7.6 metres, the report estimates that the Queenston shale deposit in the Russell Township area is about 7 % of the total resources in Ontario (by land area or tonnage). Using these estimates, the 110 ha licenced area on the North Russell Road Site represents less than 1 % of the provincial shale reserve and about 10 % of the reserves in Russell Township.

The Aggregate Resources Inventory of the United Counties of Prescott and Russell (Rowell, 1997) provides estimated quantities of aggregate reserves, based on interpretation of published geological data and a number of assumptions. The report states that the total land area with less than 8 metres of soil cover where Queenston shale is mapped as being the uppermost bedrock formation, excluding licensed sites under the ARA, i.e., excluding the licensed area on the North Russell Road Site, is estimated to be 1259.2 ha, with an estimated possible resource area of 1014.4 ha. Assuming a workable thickness of 18 metres, this corresponds to a possible bedrock resource of 483.7 million tonnes. The ARA licensed area of 110 ha would correspond to about 10% of the possible resource area in Russell Township.

The publication *Shale Resources of Southern Ontario: An Update* [Rowell, 2012] confirms that the Queenston shale is the main raw material used in brick manufacturing, and that shale extraction in Ontario has been fairly consistent at about 2 million tonnes per year. Updated estimates of shale reserves in Ontario are not provided.

The estimates of shale reserves in the province, and in Russell Township, provided in the above documents are based on broad assumptions and limited site-specific information. The preliminary drilling program carried out on the North Russell Road Site for the proposed CRRRC project provides a greater amount of site-specific factual information on the occurrence and distribution of shale thickness that underlies both the licensed area and the overall Site. The drilling indicates that beneath the portion of the licensed area between North Russell and Eadie Roads, the thickness of the shale increases from south to north. Beneath the portion of the licensed area east of Eadie Road, the base of the shale rises towards the east and is not indicated to be present about halfway across this part of the property. Using the elevation and horizontal extent to which quarrying has been completed to date, the licensed quarry base elevations and interpretation of the on-Site borehole and test pit information, it is estimated that there is about 3 to 3.2 million cubic metres of shale that remains for possible extraction under the existing ARA licence.

The published geological mapping shows the areal extent of the north-south till ridge, which represents an area of relatively shallow soil cover over the bedrock. Based on the above assumption that 8 metres of soil cover is acceptable for establishing a quarry operation, the interpreted extent of the east-west band of Queenston shale that overlies the till ridge is considered to represent an area that could be considered in future as possible shale reserve beyond the limits of the currently licensed site. Based on the findings of the preliminary on-Site drilling, the Queenston shale is indicated to not extend as far east as shown on the published bedrock mapping; as such, it is interpreted that the possible shale reserve is present mostly to the north, south and west beyond the existing licensed quarry, extending a distance of perhaps 1 to 1.5 km.

In 2009/2010 the United Counties of Prescott and Russell undertook a survey and review of aggregate resources in the County, for the purpose of updating the aggregate section of their Official Plan. As described previously, although this review is still in progress, from discussion with the County Planner in early 2013, it is understood that there should be no changes in terms of designation of aggregate resources around the existing quarry site because of the large area of shale within which the quarry is located and because a large area is already licenced.

Table 2.1-1: Summary of NRR Site Considerations

Component	Summary of Site Considerations
Land Use & Socio-economic	<ul style="list-style-type: none"> ■ Use does not conform to the intent of the OP; ■ Official Plan Amendment required; ■ OPA would need to review consistency with PPS; ■ Limited incompatible land uses and a single institutional use, being a cemetery; and ■ North Russell Road is a Collector Road.
	<ul style="list-style-type: none"> ■ It is known that a portion of the NRR Site is underlain by a licensed quarry. The quarried material is Queenston shale that is a mineral aggregate resource used in the manufacture of brick in Ontario. It is understood that the quality of the shale at this location is not as economically favourable for brick manufacturing as the much larger Queenston shale deposits in southern Ontario; ■ It is likely that this shale deposit extends beyond the licensed quarry and the NRR Site limits, mainly to the north, south and west; and ■ There are no other known or probable aggregate resources on the Site or within 500 metres.

2.2 Boundary Road Site

The BR Site is located within the Rural Area of the City of Ottawa. The land use planning policy for this area is determined by the City of Ottawa's OP and Zoning By-law.

There is limited residential development in the study area and no institutional uses were identified.

Provincial Policy Statement (PPS), 2005

Planning policies for Rural Areas within Municipalities are addressed in Section 1.1.4 of the PPS. In rural areas located in municipalities permitted uses and activities shall relate to the management or use of resources, resource-based recreational activities, limited residential development and other rural land uses.

Development of these lands shall be appropriate to the infrastructure which is planned or available, and avoid the need for the unjustified and/or uneconomical expansion of this infrastructure. Development that is compatible with the rural landscape and can be sustained by rural service levels should also be promoted.

Locally-important agricultural and resource areas should be designated and protected by directing non-related development to areas where it will not constrain these uses.

Opportunities should be retained to locate new or expanding land uses that require separation from other uses; and recreational, tourism and other economic opportunities should be promoted.

Waste Management Systems are defined by the PPS as sites and facilities to accommodate solid waste from one or more municipalities and includes landfill sites, recycling facilities, transfer stations, processing sites and hazardous waste depots. Section 1.6.8 of the PPS lays out policies for Waste Management Systems. It states that "Waste management systems need to be provided that are of an appropriate size and type to accommodate present and future requirements, and facilitate, encourage and promote reduction, reuse and recycling objectives."

Shape the Future: Eastern Ontario Smart Growth Panel, 2003

As noted previously, in 2002 the government appointed a Smart Growth panel for eastern Ontario to develop recommendations for bringing growth and prosperity to eastern Ontario.

When the eastern panel was established, the Minister of Municipal Affairs and Housing challenged panel members to think creatively and to come up with a bold new strategy to guide eastern Ontario's growth over the next 30 years.

In Section 2 of the Panel's final report, recommendations were made for enhancing environmental stewardship. Section 2.3 dealt with waste management.

"The panel has recognized that waste management is a significant issue now and will continue to be in the future. Disposing of waste has become a costly exercise, financially and environmentally. Co-operation among provincial and municipal governments and stakeholders must exist in order to develop a more comprehensive, integrated waste management plan for the zone. Eastern Ontario must strive to embrace alternative technologies, and the re-use and reduction of waste when considering waste disposal."

The proposed CRRRC would be a step in assisting eastern Ontario to deliver on the Panel's recommendations.

City of Ottawa Official Plan, 2003-203

The City completed a five-year review in 2008 of its OP. The subject lands are designated as General Rural Area on Schedule A of the City of Ottawa’s OP. As shown in Figure 2.2-1, the lands immediately to the west and south of the Site are also designated General Rural Area, while the lands to the north, separated from the site by Highway 417, are designated Natural Features Area. The lands to the south east of the site are designated Agricultural Resource Area.

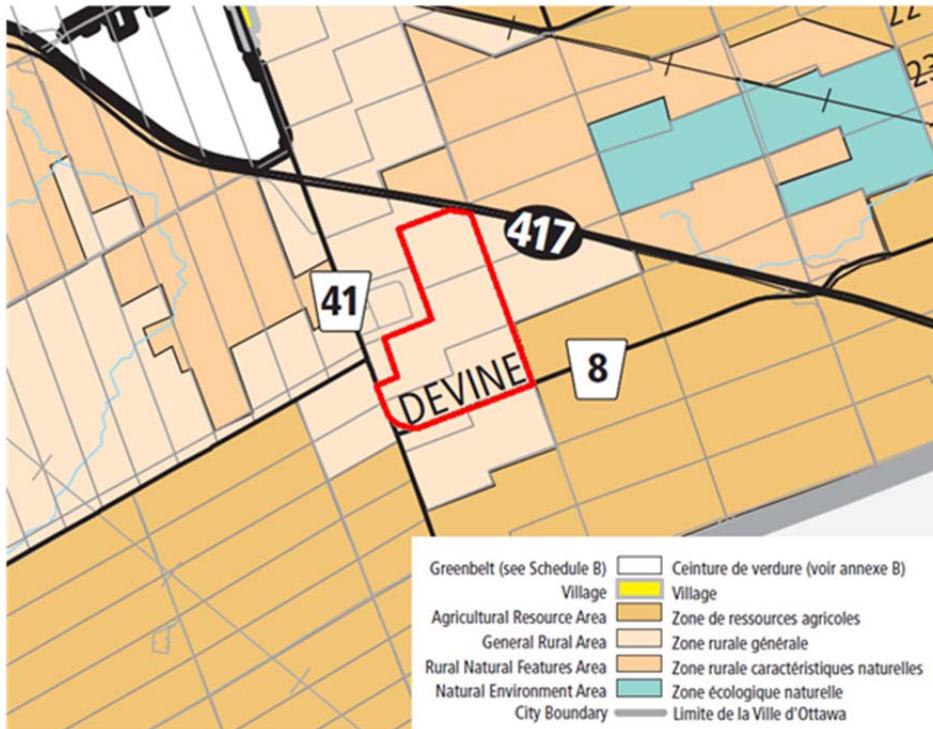


Figure 2.2-1: City of Ottawa Official Plan 2003-203 Schedule A

The City is currently undertaking the next five-year review of their OP which includes a Land Evaluation and Area Review for Agriculture areas. A draft report was issued in 2012, which identified various calculation options for mapping agriculture parcels and areas throughout rural Ottawa. The subject Site was not included in those lands that were being recommended to be added to the City’s Agricultural lands as part of the background report.

Section 3.7.2 of the City’s OP outlines the development policies for lands designated General Rural Area. The intent of this designation is to accommodate a variety of land uses that are appropriate for a rural location and a limited amount of residential development where such development will not preclude continued agricultural and non-residential uses.

General Rural Area

General Rural Areas are designated on Schedule A with the intent to provide a location for agriculture uses and for those non-agricultural uses that, due to their land requirements or the nature of their operation would not be more appropriately located within urban or Village location.

Policy 4 of section 3.7.2 states that: A zoning by-law amendment will be required where any of the following uses are proposed in General Rural Areas:

- a) New industrial and commercial uses, such as farm equipment and supply centers, machine and truck repair shops, building products yards, landscape contractors, and nurseries; and
- b) Uses that are noxious by virtue of their noise, odour, dust or other emissions or that have potential for impact on air quality or surface water or groundwater, such as salvage or recycling yards, composting or transfer facilities; concrete plants; the treatment of aggregate products; and abattoirs.

The evaluation criteria for rezoning identified in Policy 4 are as follows:

- a) The use would not be better located in a Village or the urban area;
- b) If the use is to be located on a local road, it must be demonstrated that the volume and pattern of traffic flow anticipated from the development will not interfere with the proper functioning of the local road network;
- c) The privacy of adjacent landowners or the amelioration of potential adverse impacts from lighting, noise, odour, dust or traffic can be achieved by separating the land uses, buffering or other measures as part of the development;
- d) The potential for reducing possible impacts on neighboring agricultural uses or nearby rural residential or Village communities, where relevant;
- e) The development is in keeping with the surrounding rural character and landscape;
- f) All those requirements of Sections 2 and 4 related to transportation, servicing, design and compatibility and environmental protection;
- g) Noxious uses will only be considered where suitable screening and buffering can be provided and generally these uses will not be considered in locations within groundwater recharge areas or immediately adjacent to residential areas, Scenic-Entry Routes, or waterfront areas; and
- h) The impact that the development will have on the protection of tree cover and local wildlife movement, as result of proposed site clearing and grading, fencing, security lighting, and other similar site plan matters.

Solid Waste Disposal

The City's OP also has specific policies in Section 3.8 which deal with Solid Waste Disposal. Solid Waste Disposal sites are identified on Schedule A with a solid dot: "●"

Operating and non-operating Solid Waste Disposal Sites are landfills, dumps, incinerators and any other facilities providing for the long-term storage or destruction of municipal solid waste. Composting, recycling and transfer facilities are considered processing operations.

The City will require an OP amendment for the establishment of any new Solid Waste Disposal Site. The City will evaluate applications based on the following:

- a) The proponent has completed an Environmental Assessment or an Environmental screening Report under the *Environmental Assessment Act*;
- b) Compliance with a Terms of Reference for the Environmental Assessment, as approved by the Minister of the Environment under the *Environment Assessment Act*; or in the case of a project using the Environmental Screening Process, the submission of a Notice of Completion to the Ministry of the Environment; and
- c) Does not duplicate the requirements of the *Environmental Assessment Act*.

Human health and safety may be affected within the area of influence of an operating or non-operating solid waste disposal site. The most significant contaminant discharges and visual problems normally occur within 500 metres of the perimeter of the fill area.

Land within 500 metres of an operating or non-operating solid waste disposal site boundary is considered to be the influence area of the site. However, where the City or the owner of the site, has determined through an Environmental Assessment, Hydrogeological analysis or similar study that significant ground, surface or air-borne impacts occur at a distance greater than 500 metres, the greater distance will establish the influence area.

Transportation

Schedule G of the OP as shown in Figure 2.2-2 identifies Boundary Road, Devine Road and Regional Road 8 as Arterial Roads. Section 2.3.1 (48) outlines policy related to the movement of goods throughout the City. It notes that “The City will minimize the impact of truck traffic on residential neighborhoods caused by the presence of these vehicles and their noise, vibration and emissions by ensuring the availability of a comprehensive truck route network based on the arterial road system”.



Figure 2.2-2: City of Ottawa Official Plan 2003-203 Schedule G

The City's Transportation Master Plan further details the City's objectives for Transportation. Section 6.10 Goods Movements notes that:

"While efficient goods movement by truck, rail and air supports Ottawa's economic livelihood and competitiveness, trucks remain the primary mode of local freight transportation. Ottawa's truck route system is generally represented by arterial roads that can withstand use by heavy trucks, the sizes of which are legislated by the Province of Ontario."

Groundwater

Section 2.4.4 of the City's OP outlines policy for groundwater management. It is the responsibility of the City for the regulation of land use and development that impacts groundwater resources; the operation of public drinking water systems including public communal wells and the delivery of public health programs and educational materials.

The following policies shall apply:

- 1) Where monitoring and characterization of the groundwater resource has indicated degradation of the resource function, the zoning by-law will restrict uses to prevent further impacts on that function; and
- 2) Where monitoring and characterization of the groundwater resource has indicated that a significant resource function exists, the zoning by-law will restrict uses to protect that function.

The City will:

- 1) Investigate, identify, record and analyze the extent and characteristics of the groundwater resources;
- 2) Identify and evaluate potential sources of groundwater contamination which arise from a variety of land-use practices and industrial activities;
- 3) Develop and maintain a database, which will provide ready access to, and manipulation of, groundwater data, including geological, hydrogeological and water quality information and make database information available to the public;
- 4) Ensure that there are current best management practices, protection policies and regulations to guide development so that reliable use and functions of groundwater resources can be maintained;
- 5) Use the information gained through investigation and analysis when reviewing development and building applications under the *Planning Act*, and
- 6) Ensure that programs to inform the community about best practices related to groundwater resource issues are developed and that the community is involved in collective decision-making regarding the protection, preservation and stewardship of groundwater resources and in making wise individual decisions regarding private well and septic matters.

Additional Official Plan Policy

The site is located more than one kilometre from the Village Boundary of Carlsbad Springs and from the City's Boundary. Edwards is no longer identified as a Village in the OP.

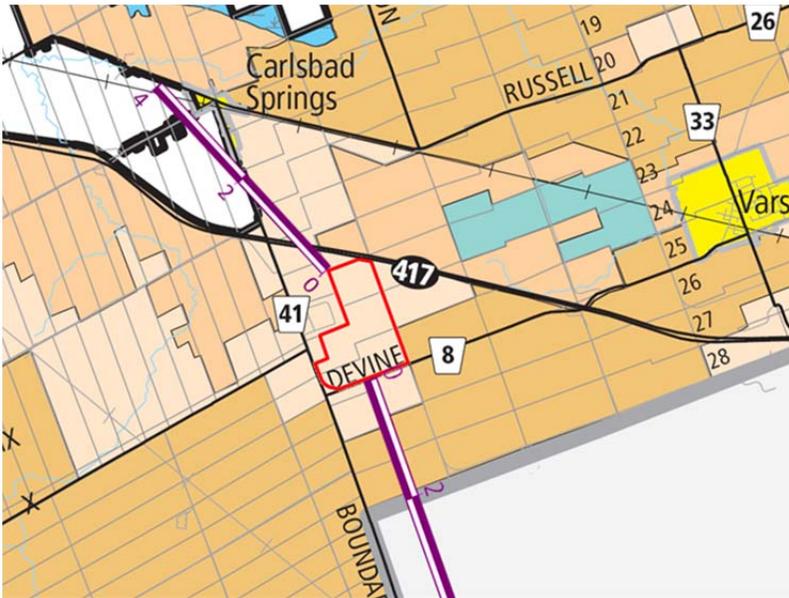


Figure 2.2-3: City of Ottawa 2003-203 - Distance from Subject Site to Village and City Boundary (kilometres)

The City does not identify any Environmental Constraints or Natural Features on the BR Site lands as shown on Schedule K (Figure 2.2-4) and Schedule L1 (Figure 2.2-5) of the OP.

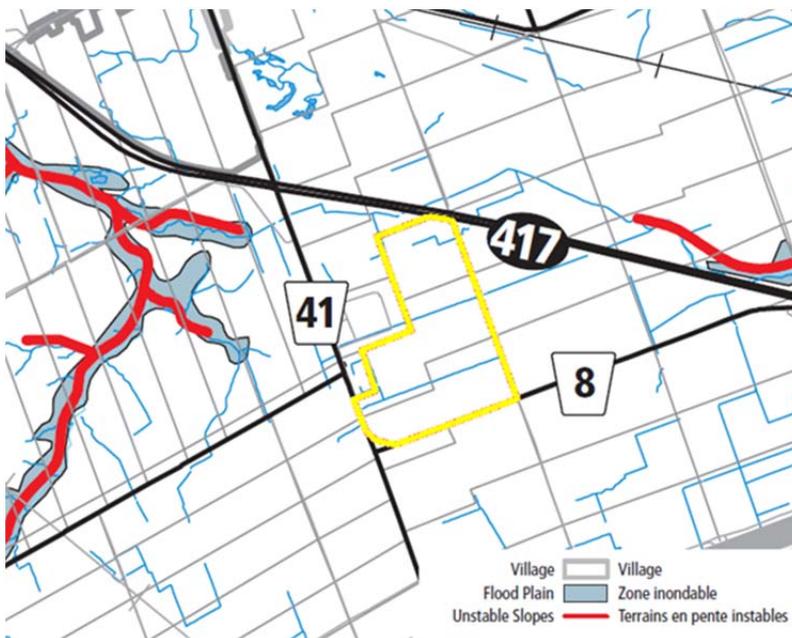


Figure 2.2-4: City of Ottawa Official Plan 2003-203 - Schedule K

As part of OPA 76 (five year review of the OP) the City approved Annex 14 which identified Natural Heritage System Features. As the result of an appeal, Annex 14 was not accepted by the Ontario Municipal Board (OMB) for inclusion in the OP.

On October 24th of 2012, Ottawa City Council approved and adopted an amendment to the Official Plan which amended policy and mapping changes to the Official Plan in order to update the Natural Heritage System.

This amendment included changes to policies related to the Natural Features and Functions, Environmental Impact Statement and Implementation as well as including new Natural Heritage System Overlay maps, labelled as Schedules L1, L2 and L3.

As a result of this amendment, the area on BR Site that were previously identified as significant woodlands in Annex 14 of the Official Plan were removed as being identified as a natural heritage feature overlay. These changes were the result of the City's re-evaluation of documentation.

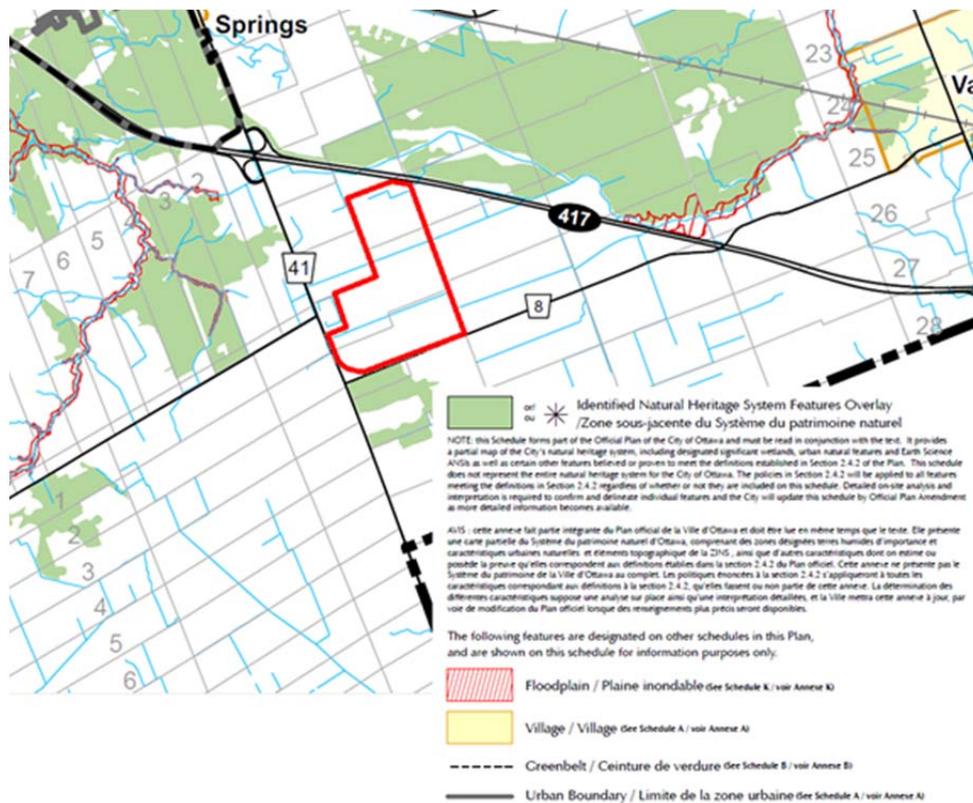


Figure 2.2-5: City of Ottawa Official Plan 2003-203 - Schedule L1

Discussions with City of Ottawa Staff

Through discussion with Mr. Jeff McEwen, Rural Services (Wards 5, portion of Ward 19 within Rural Area 20, 21) Acting Program Manager it was determined that the City is currently undertaking a review of Agricultural lands as well as Mineral-Aggregate Resources throughout the City. The draft released for the review of Agricultural lands has not identified the BR Site as being included within additional lands to designate agricultural. The Mineral Aggregate study is still under review and is not yet available to the public.

The City is also currently undertaking an Infrastructure Master Plan Review for the Rural Area.

City staff is currently unaware of when these reviews will be finalized, but once they are completed their recommendations will be incorporated into the City's Official Plan Update. The City is expected to begin its review of the Official Plan in 2013.

There are currently no OPAs applied for with the City of Ottawa in the Site-vicinity of the BR Site.

City of Ottawa Zoning By-law (2008-250)

The majority of the subject lands are currently zoned Rural (RU) in the City of Ottawa's Zoning By-law, with the balance zoned Rural Heavy Industrial (RH) as shown in Figure 2.2-6. The development of these lands will require an amendment to this By-law.

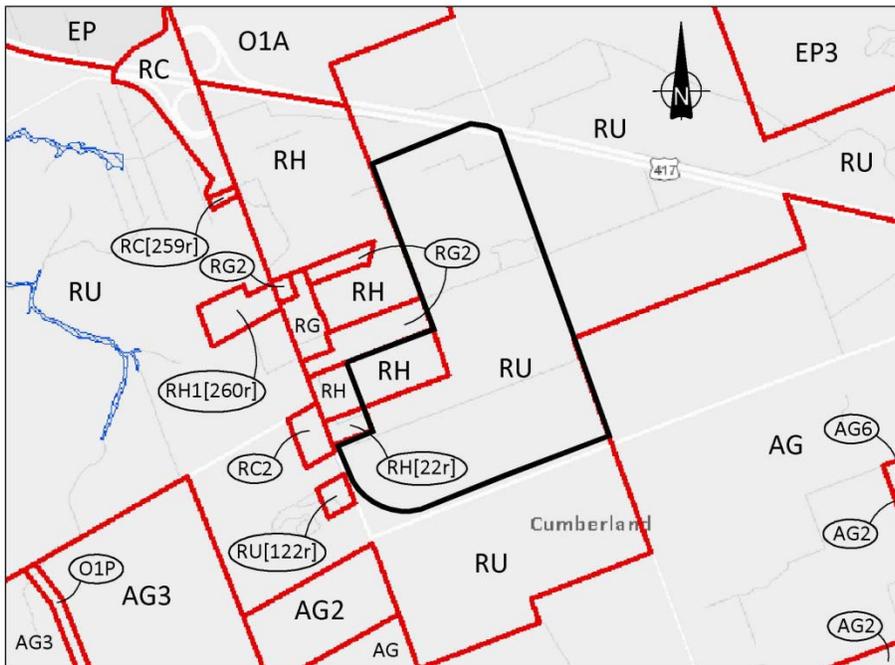


Figure 2.2-6: City of Ottawa Zoning By-law 2008-250

Discussions with City of Ottawa Staff

Through discussion with Mr. Jeff McEwen, Rural Services (Wards 5, portion of Ward 19 within Rural Area 20, 21) Acting Program Manager it was determined no zoning or site plan applications have been applied for with the City in the Site-vicinity of the BR Site.

Aggregate Resources

Previous subsurface investigation on and in the area of the Boundary Road Site (WESA, 1986), as well as current preliminary on-Site investigation indicates that the Site is underlain by a surficial sand layer followed by an extensive and thick deposit of silty clay. The surficial sand layer generally consists of silty sand having a thickness generally ranging from about 0.6 to 1.2 metres.

Because of its fine grained nature, this surficial sand layer is not of high quality as a potential aggregate material. Also, the layer is relatively thin compared to what would typically be considered for an aggregate resource operation, i.e., Aggregate Resource Industry Reports (ARIP) consider 6 m as a minimum thickness for identification as an aggregate resource, and there are already sand resources within the City that are known and reasonably plentiful, even within the existing licensed pits

From review of the 1995 study regarding aggregate supply in the Region of Ottawa-Carleton, which includes sand, gravel, crushed stone, shale and clay, there are no aggregate resources at or within 500 metres of the BR Site (MHBC, 1995). Additionally the Ministry of Northern Development and Mines prepared the first Aggregate Resource Inventory Paper (ARIP) for the Ottawa Region in 2013 and it does not show any aggregate resource at or within 500 metres of the BR Site (MNDM, 2013).

Table 2.2-1: Summary of BR Site Considerations

Component	Summary of Site Considerations
Land Use & Socio-economic	<ul style="list-style-type: none"> ■ PPS does not identify lands of Provincial Interest; ■ OP states that CRRRC use may be permitted in designation; ■ OP Amendment needed; ■ Generally compatible with adjacent land uses and there are no institutional uses; ■ On an Arterial Road.
	<ul style="list-style-type: none"> ■ There are no known or probable aggregate resources on the Site or within 500 m.

3.0 SITE COMPARISON – LAND USE & SOCIO-ECONOMIC

3.1 Comparison of Sites

3.1.1 Current and Planned Future Land Use

Both the NRR Site and the BR Site would require OPAs and Zoning By-law Amendments in order to permit the development of the CRRRC.

The re-designation of the NRR Site would extend beyond the aggregate designation and include Agricultural lands.

Even with all of the appropriate technical and planning studies, it is expected that this OP amendment will be subjected to considerable scrutiny due to the NRR Site being located in an area of mineral aggregate and agricultural resources.

The Provincial direction is to preserve large agricultural areas for the long-term benefit of the Province. Areas with large or significant mineral aggregate deposits are also intended to be protected. This would mean that an amendment to the UCPR to remove both the agricultural and mineral aggregate lands could be appealed to the Ontario Municipal Board (OMB) on the grounds that the amendment is not consistent with the PPS.

No material planning constraints have been identified to re-designation of the BR Site by the City of Ottawa.

The BR Site is clearly preferable to the NRR Site in terms of compatibility of the CRRRC with adjacent land uses. There is an existing industrial park adjacent to the BR Site, as well as a soil handling business visible from Boundary Road. Highway 417 borders the BR Site to the north.

Both Sites have road networks that identify the importance of the roads for use by a wide range of vehicle types, and in large volumes.

3.1.2 Mineral Aggregate Resources

A portion of the NRR Site is underlain by a licensed quarry. The quarried material is Queenston shale that has been a mineral aggregate resource used in the manufacture of brick in Ontario. It is understood that the quality of the shale at this location is not as economically favourable for brick manufacturing as the much larger Queenston shale deposits in southern Ontario. It is likely that this shale deposit extends beyond the licensed quarry and the NRR Site limits, mainly to the north, south and west. There are no other known or probable aggregate resources on the NRR Site or within 500 metres.

There are no known or probable aggregate resources on the BR Site or within 500 m.

3.2 Results of Site Comparison

After analysis of both land use and socio-economic factors for both sites, the preferred site for the CRRRC with respect to current and proposed planned future land uses is clearly the BR Site.

With respect to protection of mineral aggregate resources, the BR Site is also clearly preferred.

REFERENCES

- City of Ottawa (2003) By-law 2003 – 203, The Official Plan for the City of Ottawa
- City of Ottawa (June 25, 2008) By-law 2008-250, The Zoning By-law for the City of Ottawa
- Guillet, G.R. and Joyce, I.H. (1987). *The Clay and Shale Industries of Ontario*. Ontario Ministry of Natural Resources.
- MHBC. (1995). *Mineral Resource Study, Regional Municipality of Ottawa-Carleton*. Ottawa.
- Ministry of Northern Development and Mines. (2013). *Aggregate Resource Inventory of the City of Ottawa*. Ontario Geological Survey Aggregate Resources Inventory Paper 191.
- Province of Ontario, Growth Secretariat of the Ministry of Municipal Affairs and Housing, (October 2003) Shape the Future: Eastern Ontario Smart Growth Panel, 2003.
- Province of Ontario, Ministry of Municipal Affairs and Housing, (March 1, 2005) Provincial Policy Statement.
- Rowell, D.J. (1997). *Aggregate Resources Inventory of the United Counties of Prescott and Russell*, Ontario Geological Survey, Aggregate Resources Inventory Paper 169.
- Rowell, D.J. (2012). *Shale Resources of Southern Ontario: An Update*, Ontario Geological Survey Open File Report 6278.
- Township of Russell, (July 4, 2011) By-law 46-2011, Zoning By-law of the Corporation of the Township of Russell.
- United Counties of Prescott and Russell (1999) The Official Plan for the Corporation of the United Counties of Prescott and Russell.
- WESA. (November 1986). Hydrogeological Data, Site 3 and 10, Phase 1 Report. Prepared for the regional Municipality of Ottawa-Carleton.