

**AGGREGATE RESOURCE
MANAGEMENT
IN THE
REGION OF HALTON**

**PART 2 - ESTABLISHING A
POLICY FRAMEWORK**

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Phase 3
Sustainable Halton Report 3.05



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1.0 INTRODUCTION

1.1 INTENT OF STRATEGY

In accordance with the Places to Grow Act, 2005, municipalities have three years to implement the Growth Plan in their planning documents. It is on this basis that the Region of Halton has embarked on the Sustainable Halton planning process (SHP). The primary objective of the SHP is to determine how population and employment will be allocated to the four lower tier municipalities in the Region. A further objective of the SHP is to identify and protect those features and resources which are an integral component of the Region (environmental and agricultural lands) and/or which are required in the future to support growth (aggregates).

It is in this context that a number of studies are being carried out to help shape what Halton will look like in 25 years and beyond. All of these studies will provide input towards the policies within the Region of Halton Official Plan (ROP). Changes to local Official Plans (Burlington, Oakville, Milton and Halton Hills) will also be required following the completion of the ROP update process.

The development of an aggregate resource strategy for the Region has long been considered a priority. Given that the Growth Plan anticipates considerable population and employment growth in the Greater Toronto Area (GTA) to 2031 and beyond, there is an expectation on the part of the Province that the mineral aggregate resources required (some of which are in the Region) to support that growth and required infrastructure will be available at a reasonable cost.

The current application process for new or expanding resource uses in the Region of Halton requires an investment of several years and significant resources for detailed technical studies. The development of a new aggregate resources strategy provides the Region with an opportunity to improve the current state of affairs by being much more proactive on what the Region's expectations are in terms of where extraction is anticipated to occur in the future and under what conditions. In addition, an opportunity exists for the Region to take the lead on policy approaches to minimize social, environmental and human health impacts that reflect Regional priorities. It is hoped that the end result will be more surety for the industry and the public to inform property investment decisions, reduce conflict and reduce the time and resources required to process individual applications. All policy approaches considered will have to be consistent with the Provincial Policy Statement (PPS) and balanced against other Provincial and Regional policies and objectives.

The development of an aggregate resource management strategy in Halton will result in changes to the ROP, which pre-dates the 2005 Greenbelt Plan and the 2005 PPS. The Greenbelt Plan contains a number of specific policies on aggregate extraction (such as the maximum amount of disturbed area permitted, rehabilitation, significant woodlands) that are required to be implemented in the ROP. According to the Greenbelt Plan, the ROP cannot contain policies that are more restrictive than the Greenbelt Belt, with respect to aggregates. In addition, the ROP is now required to 'be consistent' with the 2005 PPS.

On the basis of the above, the overall intent of the strategy is to:

- Make specific recommendations on what policy approach should be adopted for the shale deposits located in the 'Primary Study Area', which is defined as the lands not subject to the Greenbelt Plan in the Region of Halton;
- Identify land use policy options for the protection of resource areas and the extraction of aggregate on a Region-wide basis while minimizing land use conflicts;
- Identify a role for Best Practices in the Region's Strategy, including resource conservation and rehabilitation; and,
- Recommend specific changes to the Regional Official Plan (ROP) to ensure conformity with the Provincial Growth Plan, Greenbelt Plan and Provincial Policy Statement (PPS – 2005) with respect to aggregate resources.

Given that the primary focus of the Growth Plan is to plan for the use of land within the Primary Study Area, the one component of the Aggregate Resources Strategy that needs to be considered in choosing the preferred land use plan by June 2009 is the extent to which potential shale resource areas will be identified and protected from urban development. This is because almost all of the potential shale resource areas mapped by the Province are located in the Primary Study Area. It is anticipated that the other components of the strategy will be finalized by the end of 2009.

1.2 INTENT OF DISCUSSION PAPERS

The intent of the first Discussion Paper (Part 1 – Overview of Resource Management Issues and Options for the 'Primary Study Area') dated November 2007 was to:

- Provide an overview of the 'State of the Resource' in the Region;
- Provide an overview of the Provincial and Regional Policy Context as it relates to aggregate extraction;
- Provide a number of options on how the identified resource areas in the 'Primary Study Area' should be treated as part of the Growth Plan Implementation exercise (Sustainable Halton); and,
- Introduce a number of potential land use policy options and approaches that could be considered as part of the update to the ROP that will be carried out later in the SHP process.

The intent of this Second Discussion Paper (Part 2 – Establishing a Region-wide Policy Framework) is to establish the basis for and describe a policy framework that will be used to develop new Official Plan policy. In this regard, the recommended policy framework will contain a series of directions that set out what the Region's goals and objectives are with respect to the mapping of the resource areas in the Official Plan, the uses to be permitted in resource areas, the approval process, net environmental gain, conservation and recycling and monitoring.

This Discussion Paper is to be read in conjunction with the Part 1 Discussion Paper dated November 2007. As a result, the sections dealing with the State of the Resource in Halton (Section 1), Policy Context (Section 2), Policy Options for Shale in the Primary Study Area

(Section 3) and Land Use Policy Approaches in the Region (Section 4) of the Part 1 Discussion Paper form part of the overall discussion on an Aggregate Resource Strategy for the Region. It is noted however that some of the policy approaches discussed in Sections 3 and 4 of the Part 1 Discussion Paper have been further considered since November 2007 and a number of modifications to these suggested approaches have been made in the context of this Part 2 Discussion Paper.

It is noted that this Part 2 Discussion Paper will be available to the public in April 2009 and will then be subject to public and agency review. The actual policies that are based on the draft framework presented in this Discussion Paper will not be prepared until the Spring/Summer of 2009.

2.0 ESTABLISHING AN AGGREGATE POLICY FRAMEWORK

The intent of this section of the Discussion Paper is to present a policy framework that would be the basis for the preparation of Official Plan policy. Given that the location of resource areas, its relationship to other land uses and constraints and the form the mapping of the resource will take is a key component, this section begins by recommending how potential resource areas should be mapped in the Region of Halton Official Plan (ROP). The implications of this mapping approach will also be discussed, particularly with respect to the amount of land identified as a potential shale resource area.

2.1 RESOURCE AREA MAPPING IN THE REGIONAL OFFICIAL PLAN (ROP)

2.1.1 Introduction

At the present time, mineral resource extraction areas that are licensed are designated on the Land Use Schedules to the ROP. Primary and secondary resource areas, as identified on Provincial ARIP mapping, are not shown on any of the schedules to the ROP, nor are they identified on any of the appendices. Instead, Section 112(1) of the ROP, as amended by ROPA 25, refers readers to mapping prepared by the MNDM or the MNR. This means that mapping from the Province has to be consulted when considering and assessing applications for development in identified resource areas.

The Halton approach to identifying the extent of the resource is relatively unique in Ontario. The Region historically adopted this approach because it felt that the ROP policy framework applying to the rural area was relatively rigid, in terms of not permitting uses that would be considered incompatible with mineral resource extraction operations. In addition, the Region felt that since the mapping was at a relatively high level, it would be inappropriate to include such conceptual mapping in an Official Plan when it could be substantially revised as new information becomes available.

Given that the Region of Halton will be updating its Official Plan, the Province has requested that resource area locations as mapped by the Province be shown on mapping within the new Official Plan. While the extent of the resource area to be mapped will be the subject of much discussion and deliberation, the intent of the Province is that whatever resource area is agreed to, it must be identified on mapping contained within or attached to the Official Plan.

Many municipalities in Ontario have included resource area mapping within their Official Plans. Some of these municipalities then rely upon this mapping to designate lands for extraction. In other municipalities, the mapping is included as an overlay designation, meaning that the policies of the underlying designation apply, subject to meeting the tests in the overlay designation. Other municipalities identify resource areas on an appendix to the Official Plan.

The main benefit of identifying resource areas on an Official Plan schedule is that it provides some information to landowners and potential landowners on where resource extraction activities may be occurring in the future. In addition, the industry benefits from the mapping since the areas identified can potentially be relied upon to make investment decisions and support the submission of an actual application. As a result, there are benefits to both the general public and the industry in identifying areas where extraction activities may occur in the future. It is noted

however that an application to develop a resource use could still be made if the lands were not identified as a resource area. This is because the mapping, while based on sound information, is still a 'high level' map, meaning that more detailed analyses on any site may identify a potential resource.

In terms of 'status', a map showing resource areas on a schedule to the Official Plan has more 'status' than if the same information was shown on an appendix. Appendices are generally intended to provide the reader with some of the information relied upon when the actual policy framework was developed. In this regard, appendices are intended to 'inform', and are not intended to be 'determinative'. It is also commonly accepted that as new information becomes available, the information contained within an Appendix can be modified, without amending the Official Plan. If the same information is shown on a Land Use Schedule, the importance of the mapping is elevated since the map requires the approval of the approval authority and can only be amended through further approvals, with each approval being subject to appeal. In addition, the mapping can be relied upon more in making land use decisions, since the decision maker is obligated to consider both the policies and related mapping that form part of the Official Plan.

2.1.2 Recommended Mapping Approach

On the basis of the experiences and practices of a number of other Ontario municipalities, it is recommended that resource areas identified by the Province be shown on a schedule that forms part of the Official Plan.

The intent of such a schedule is three fold. Firstly, it would identify on a schedule where such resources may be located for the purposes of determining whether, when an alternate land use is proposed, an assessment of the impact of that alternate land use on the feasibility of extracting that resource in the future is carried out. The second intent is to assist in ensuring that landowners in a municipality have the benefit of some information on where resource extraction may occur in the future prior to making personal or business decisions with respect to their property. Lastly, including potential resource areas on a map would establish the principle that a certain area has been identified as being the site of resource, and is required to be protected for potential resource use in the future.

The inclusion of a schedule showing potential resource areas in an Official Plan does not imply that the future extraction of aggregate from those lands so identified takes precedence over any land use. Instead, the intent of the Schedule would be to only identify where the resource is. The approval of a resource use would still be required to go through the planning process and as part of that review, it may be determined that developing a resource use in the location proposed does not represent good planning.

2.1.3 The Mapping of Resource Areas

It is not recommended that all resource areas be identified on a schedule. There are clearly areas that, as a result of their current use, cannot be used for resource extraction, such as urban areas. In addition, there are also areas that have been identified as not being suitable for extraction by Provincial policy. On this basis, including mapping in the Official Plan that identifies resource areas that are not available for resource use would be misleading.

Pre-Emptive Constraints

As a result, it is recommended that resource areas be 'net' of areas that are the site of 'pre-emptive' constraints. For the purposes of this analysis, these areas are those areas that are clearly identified by Provincial policy as being protected from development or site alteration or not available for resource use. Pre-emptive constraint areas include:

- Provincially Significant Wetlands (development and site alteration not permitted by PPS);
- Habitat of endangered and threatened species (it is noted that these areas cannot be mapped);
- Escarpment Natural Area designation in the NEP (not available for extraction);
- Escarpment Protection Area designation in the NEP (not available for extraction);
- Urban Areas, Hamlets and Rural Clusters (according to lower tier Official Plans);
- Lands within 200 metres of the escarpment brow (not available for extraction);
- Minor Urban Centres (NEP);
- Public Lands (NEP);
- Significant Woodlands in the Protected Countryside (it is noted that expansions of existing resource uses are permitted – these lands are not available for extraction according to the Greenbelt Plan).

Map A attached shows the results of this mapping exercise. The location of resource areas is based on mapping released by the Ministry of Northern Development and Mines in 2009. The extent of the only natural heritage feature that is mapped (PSW's) is based on information provided by the Province. The mapping of the habitat of endangered and threatened species cannot be mapped, since their location is not intended to be generally accessible by the public. Significant woodlands in the Greenbelt Plan area cannot be mapped (as of March 2009), since the criteria that determine significance have not been finalized. In addition, the 200 metre setback from the brow has not been mapped on Map A, but will be in further drafts as the process moves forward. It is also noted that Wellhead Protection Zones 1 and 2 and floodplains continue to be shown on Map A. Both of these areas will also be further considered.

It is noted that although lands may be identified as not being the subject of a pre-emptive constraint as part of the mapping exercise that led to the preparation of Map A, much of this land area may be unavailable for resource use if the lands cannot be purchased, or if the assembly of multiple properties is required. In addition, some of these lands may not be accessible if they are separated from public roads by areas that are subject to a pre-emptive constraint or other properties that may not be available for purchase or lease. The Ontario Stone, Sand and Gravel Association (OSSGA) has made this point on numerous occasions based on their own analysis.

It is lastly noted that an application to establish a resource use can still be submitted, even if the affected lands are the site of a pre-emptive constraint. Such an application may be submitted if the proponent believes that the mapping of the pre-emptive constraint is inaccurate, or if the identification of the feature as a pre-emptive constraint is inaccurate on the basis of further analysis or if the pre-emptive constraint should not be identified as such. In the case of the latter, the industry has taken the position that Provincially Significant Wetlands should not be a pre-emptive constraint since the number of these wetlands in resource areas are significant and have an impact on locating viable sites. However, the PPS does not provide any discretion in this

regard, since Section 2.1.3 clearly indicates that development and site alteration is not permitted in significant wetlands.

Other Constraints

There are a number of other constraints to extraction that are identified in Provincial policy, but they are not considered to be pre-emptive constraints since extraction may be permitted in these constraint areas subject to further analysis. It is noted that this analysis may result in the constraint area not being suitable for resource extraction.

The key thing to note about these other constraints is the terminology used in Provincial policy and how the terms are also defined by Provincial policy. Given that there are four Provincial planning documents that affect the Region of Halton (Greenbelt Plan, PPS, Growth Plan and NEP), there are inconsistencies between the documents that do make it difficult to determine what term and definition should be applied. For example, the Niagara Escarpment Plan prohibits development in wetlands, without there being a distinction between Provincially significant wetlands, and non-provincially significant wetlands. On the contrary, both the Greenbelt Plan and the PPS only prohibit development and site alteration within Provincially significant wetlands.

Tables A, B and C below lists these secondary constraints as the term is used in the Greenbelt Plan, the NEP and the PPS. As noted above, only secondary constraints have been listed. The list of these constraints is extensive and in some cases the distinction between a feature being a pre-emptive constraint and a non pre-emptive constraint is quite fine, and potentially the subject of much interpretation and further discussion. For example, the PPS very specifically prohibits development and site alteration within floodways, but then includes a notwithstanding provision in policy that indicates that a use may be located in a floodway if the use “*which by their nature must located within a floodway*”. In my opinion, I do not believe that a resource use is such a use, since it is not a use that would customarily be located in a floodway. However, the policy framework does establish the ‘notwithstanding’ clause and as a result, it allows for multiple interpretations.

Table A: Constraints According to the Greenbelt Plan		
	Feature	Source of Information and Availability
1.	Lands within 30 metres of wetlands, seepage areas and springs, fish habitat, permanent and intermittent streams, and significant woodlands	<ul style="list-style-type: none"> • OMNR • Provincially significant wetlands are mapped by the OMNR • There is no OMNR mapping for seepage areas and springs, however CA mapping may be available. • Fish habitat areas would be identified by the OMNR. • Permanent and intermittent streams have not been mapped by the OMNR – there might be some debate on whether a stream is considered to be “intermittent”. • OMNR is responsible for identifying significant woodlands and the criteria that lead to their identification – these criteria have now been prepared and are in draft form.
2.	Significant habitat of special concern species	<ul style="list-style-type: none"> • OMNR
3.	Fish Habitat	<ul style="list-style-type: none"> • OMNR
4.	Life Science Areas of Natural and Scientific Interest (ANSI)	<ul style="list-style-type: none"> • OMNR
5.	Significant Valleylands	<ul style="list-style-type: none"> • Can be identified by the OMNR or identified by the upper or lower tier municipality.
6.	Significant wildlife habitat	<ul style="list-style-type: none"> • Can be identified by the OMNR or identified by the upper or lower tier municipality.
7.	Sand barrens, savannahs and tall grass prairies	<ul style="list-style-type: none"> • OMNR
8.	Alvars	<ul style="list-style-type: none"> • OMNR
9.	Permanent and intermittent streams	<ul style="list-style-type: none"> • CA's and OMNR • Intermittent streams have not been mapped.
10.	Lakes (and their littoral zones)	<ul style="list-style-type: none"> • OMNR and the CA's
11.	Seepage areas and springs	<ul style="list-style-type: none"> • OMNR and the CA's
12.	Lands within 120 metres of significant habitat of endangered species, threatened species and special concern species, Life Science Areas of Natural and Scientific Interests (ANSI's), significant valleylands, significant wildlife habitat, sand barrens, savannahs, and tall grass prairies and alvars in the Natural Heritage System.	<ul style="list-style-type: none"> • Adjacent lands area can be established if the feature exists and is mapped.

Table A: Constraints According to the Greenbelt Plan		
13.	Lands between 30 and 120 metres of wetlands, seepage areas and springs, fish habitat, permanent and intermittent streams, lakes and significant woodlands	<ul style="list-style-type: none"> • Adjacent lands area can be established if the feature exists and is mapped.
14.	Lands within 120 metres of a key hydrologic feature anywhere within the Protected Countryside	<ul style="list-style-type: none"> • Adjacent lands area can be established if the feature exists and is mapped.
15.	Lands outside the Natural Heritage System and within the Protected Countryside which are identified as key natural heritage features	<ul style="list-style-type: none"> • OMNR
16.	Key natural heritage features and key hydrologic features and associated vegetation protection zones, within the Natural Heritage System except significant wetlands and significant habitat of endangered species and threatened species.	<ul style="list-style-type: none"> • Expansions of resource uses are permitted • OMNR mapping exists for significant wetlands. • Information on the habitat of endangered and threatened species is not typically publicly available.
17.	Lands within the Protected Countryside but not within the Natural Heritage System	<ul style="list-style-type: none"> • As mapped by Greenbelt Plan.

Table B: Constraints According to the Niagara Escarpment Plan		
	Feature	Source of Information and Availability
1.	Wetlands	<ul style="list-style-type: none"> • The Provincially significant wetlands are identified by the OMNR. • The CA's and others have identified other wetlands.
2.	Identified habitat of endangered (regulated) plant or animal species	<ul style="list-style-type: none"> • OMNR • This information is not typically publicly available.
3.	Provincially Significant and Regionally Significant Life Science ANSI	<ul style="list-style-type: none"> • OMNR

Table C: Constraints According to the Provincial Policy Statement (2005)		
	Feature	Source of Information and Availability
1.	Protected Heritage property	<ul style="list-style-type: none"> • Identified by municipalities pursuant to the Ontario Heritage Act.
2.	Dynamic beach hazard areas	<ul style="list-style-type: none"> • OMNR • Does not apply in the Region of Halton.
3.	Defined portions of the 100 year flood level along connecting channels	<ul style="list-style-type: none"> • OMNR • Does not apply in the Region of Halton.
4.	Floodways	<ul style="list-style-type: none"> • Floodways identified by the CA's. • Not all floodways have been mapped.

Table C: Constraints According to the Provincial Policy Statement (2005)		
5.	Significant wetlands in the Canadian Shield, significant woodlands, significant valleylands, significant wildlife habitat, and significant areas of natural and scientific interest	<ul style="list-style-type: none"> • Each feature is defined by the PPS. • Criteria for determining significance are recommended by the Province, but municipal approaches that achieve or exceed the same objective may also be used. • Development and site alteration may be permitted in these features if it has been demonstrated that there will be no negative impacts on the natural features or their ecological functions.
6.	Fish Habitat Areas	<ul style="list-style-type: none"> • Extraction may be permitted in accordance with Provincial and Federal requirements.
7.	Lands adjacent to significant habitat of endangered species and threatened species, significant wetlands, significant coastal wetlands, significant woodlands, significant valleylands, significant wildlife habitat, significant of Natural and Scientific Interest and fish habitat	<ul style="list-style-type: none"> • The ecological function of the adjacent lands has to be evaluated and it has to be demonstrated that there will be no negative impacts on the natural features or their ecological functions. • It is noted that 'Special Concern Species' as identified in the Greenbelt Plan are not listed here.
8.	Sensitive surface water features and sensitive groundwater features	<ul style="list-style-type: none"> • Sensitive is defined in this context as <i>"areas that are particularly susceptible to impacts from activities or events including, but not limited to, water withdrawals, and additions of pollutants"</i>. • Development and site alteration shall be restricted in or near these features, such that these features and their related hydrologic functions will be protected, improved or restored. • Mitigative measures and/or alternative development approaches may be required.
9.	Areas adjacent to sensitive land uses	<ul style="list-style-type: none"> • Sensitive land uses as defined means buildings, amenity areas or outdoor spaces. • Such areas could potentially experience one or more adverse effects. • Adverse effects defined in the PPS as it is defined in the Environmental Protection Act. • Sensitive land uses may be part of the natural or built environment.

Table C: Constraints According to the Provincial Policy Statement (2005)		
10.	Designated vulnerable areas	<ul style="list-style-type: none"> Such an area is defined as being vulnerable, in accordance with Provincial standards, <i>“by virtue of their importance as a drinking water source that may be impacted by activities or events”</i>. Vulnerable is defined as <i>“surface and groundwater that can be easily changed or impacted by activities or events either by virtue of their vicinity to such activities or events or by permissive pathways between such activities and the surface and/or groundwater”</i>. Designated vulnerable areas include, but are not limited to areas that supply municipal drinking water.
11.	Municipal drinking water supply areas	<ul style="list-style-type: none"> Municipal drinking water supply areas are areas that are potentially separated from designated vulnerable areas, by virtue of the use of the word “and” in this section.
12.	Lands adjacent to agricultural operations and lands	<ul style="list-style-type: none"> This section applies if a new non-agricultural use or an expanding non-agricultural use, such as a mineral aggregate operation, is proposed in a prime agricultural area, as defined by the PPS.
13.	Prime agricultural areas	<ul style="list-style-type: none"> Resource use may be permitted as an interim use. Complete agricultural rehabilitation may not be required.
14.	Archaeological resources or areas of archaeological potential	<ul style="list-style-type: none"> Development and site alteration may be permitted if the significant archaeological resources have been conserved by removal and documentation, or by preservation on site. Criteria for determining significance are recommended by the Province but municipal approaches that achieve or exceed the same objective may also be used.
15.	Adjacent to protected heritage property	<ul style="list-style-type: none"> PPS indicates that adjacent lands in this context only are contiguous to a protected heritage property or as otherwise defined in the OP. Development and site alteration may be permitted if it has been demonstrated that the heritage attributes of the protected heritage property will be conserved.

Table C: Constraints According to the Provincial Policy Statement (2005)		
16.	Hazardous lands adjacent to river, stream and small inland lake systems which are impacted by flooding hazards and/or erosion hazards	<ul style="list-style-type: none"> • This section of the PPS only references “development”, and not “site alteration”. • The PPS indicates that such lands include those covered by water, to the furthest landward limit of the flooding hazard or erosion hazard limit. • Both flooding hazard and erosion hazard are defined by the PPS.
17.	Hazardous sites	<ul style="list-style-type: none"> • Hazardous sites are a property or lands that could be unsafe for development and site alteration do to naturally occurring hazards. • Such hazards may include unstable soils, organic soils or unstable bedrock.
18.	Floodways	<ul style="list-style-type: none"> • This section permits development which by their nature must locate within the floodway and it acts as a notwithstanding clause to section 3.1.2 d), which expressly does not permit development and site alteration within floodways.
19.	Flood fringe areas	<ul style="list-style-type: none"> • Development and site alteration may be permitted in the flood fringe, where a two-zone concept for floodplains is applied. • It is noted that Section 3.1.6 permits development and site alteration on hazardous lands that includes lands that are covered by water to the furthest landward limit of the flooding hazard or erosion hazard limit subject to criteria.
20.	Lands affected by mine hazards, oil, gas and salt hazards, former mineral mining operations, mineral aggregate operations or petroleum resource operations	<ul style="list-style-type: none"> • Provided rehabilitation measures to address or mitigate known or suspected hazards are underway or have been completed.
21.	Contaminated sites	<ul style="list-style-type: none"> • Such sites shall be remediated as necessary such that there will be no adverse effects, as defined.

2.1.4 Conflicts Between Provincial Plans

As noted previously, the use of different terminology in the three Provincial plans (NEP, Greenbelt Plan, Growth Plan) and the PPS results in there being a number of interpretation challenges that have an impact on how policies should be formulated and how applications should be assessed, particularly in a circumstance where the lands are subject to the NEP. It is on this basis that a harmonization exercise to determine how the three Provincial Plans can be aligned has been initiated by the NEC and Provincial staff. However, it is unclear when such a harmonization process will be completed and what implications such a process will have on the three Provincial

Plans. One possibility is that the harmonization process will not be completed until the Greenbelt Plan is reviewed as required by legislation, in 2015.

In addition to the above, there are a number of competing views on which of the policies in the 2005 PPS are to have more weight when developing new policy on aggregate resources or when dealing with an application to establish a resource use. For example, Section 2.1.3 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." The use of the word 'restore' in this section does modify the use of the words 'shall be restricted'. 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 that Section 4.3 of the PPS indicates that the Provincial Policy Statement **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'. On this basis, how these policies are balanced against each other is open to interpretation.

The application of a new Provincial Plan to the Region of Halton does however add another dynamic to how Provincial Plans and policies are interpreted. Section 14(4) of the Places to Grow Act states that:

"Despite any Act, but subject to a Regulation made under clause 18(1)(b), (c), or (d), if there is a conflict between a direction in a Growth Plan and a direction in a Plan or policy that is mentioned in subsection (5) with respect to a matter relating to the natural environment or human health, the direction that provides more protection to the natural environment or human health prevails."

The Plans and policies to which subsection 4 above refer to in subsection 5 include a Policy Statement under the Planning Act, the Greenbelt Plan, the Niagara Escarpment Plan and the Oak Ridges Moraine Conservation Plan. It is noted that the above subsections indicate that an Ontario Regulation may clarify this conflict issue. However, the only Regulations passed under this Act (Ontario Regulation 416/05 or 311/06 (amended to 324/06)), do not deal with this issue in any manner.

Section 1.4 of the Growth Plan contains additional policy on this issue of conflict:

"As provided for in the Places to Grow Act, 2005, this Plan prevails where there is a conflict between this Plan and the PPS. The only exception is where the conflict is between policies relating to the natural environment or human health. In that case, the direction that provides more protection to the natural environment or human health prevails. Similarly where there is a conflict between the Greenbelt, Niagara Escarpment, or Oak Ridges Conservation Plans and this Plan regarding the natural environment or human health, then the direction that provides more protection to the natural environment or human health prevails. Detailed conflict provisions are set out in the Places to Grow Act, 2005."

This means that any 'direction' in a Provincial Plan or Policy Statement that provides more protection of the natural environment prevails. The determination of which 'direction' should be considered will be a matter of much debate. It is recognized that the Growth Plan does not deal with mineral aggregate resources to the same extent as the PPS, Greenbelt Plan and the NEP. However, what the Growth Plan does is that it attempts to reconcile the various Provincial Plans and policies in the Growth Area by favouring any policy in any Provincial Plan or Policy Statement that is more protective of the natural environment where it conflicts with the Growth Plan. In this regard, there are policies in each Provincial Plan and the Policy Statement regarding the natural environment. More consideration of this 'conflict' issue is required.

2.1.5 Mapping of Shale Resource Areas

With respect to shale resource areas, which are also located in the Primary Study Area, based on the mapping provided by the Province showing areas with drift thicknesses that are less than 15 metres, there is between 10,000 and 12,000 hectares of land identified in both the Towns of Halton Hills and Milton.

Based on a formula established by the Clay Brick Association, which is intended to determine the number of tonnes per hectare, about 500,000 tonnes could be extracted from each net hectare.

For the purposes of this calculation, the number of net hectares is 60% of the total. On this basis, if 10,000 hectares is conservatively used as a gross amount, 6,000 hectares could actually be the site of extraction. The total amount of potential resource then is the product of the number of net hectares multiplied by the number of tonnes per hectare that can be extracted (6,000 x 500,000). The result is 3 billion tonnes. At the present time, the demand for shale is in the order of 2 million tonnes per year. It is not expected that this demand will change significantly in the future. As a result, the 3 billion tonnes potentially available in Halton (if all of the land identified was protected) would supply the brick making industry for over 1,800 years.

It is noted however, that there are a number of physical and land use considerations that need to be taken into account in determining whether an area can be used for shale extraction. These factors include the nature and location of existing land uses, the number of potentially incompatible lands uses in a defined area, the number of parcels of land required to establish a quarry that has an area of at least 20 to 30 hectares and the location of existing watercourses and their impact on the amount of available land. This latter factor is important in the Halton Hills context since there are a number of watercourses and tributaries extending throughout south Halton Hills and if it is assumed that these watercourses are fixed, the amount of land potentially available is significantly reduced.

2.2 NET ENVIRONMENTAL GAIN

As a result of the settlement of the appeals to ROPA 25, Section 110(7.2) was added to the Official Plan. This new section directs new or expanded extraction areas to locate in the Escarpment Rural and Agricultural Rural areas. This section also indicates that:

"Where the proposal includes or negatively effect areas of Greenlands A or B, the proponent is required to demonstrate that the proposal is consistent with the Provincial Policy Statement and the Provincial Greenbelt Plan where applicable

and will result in a net gain or enhancement to functions or features of the Greenland system. In this regard, the Region views the protection of Greenlands A as a priority. A net gain or enhancement shall be based on a culmination of progressive and final rehabilitation of the proposal and/or other measures initiated by the proponent prior and/or during the extraction operation."

The addition of the above policy into the ROP was not intended to imply that that applications to develop a resource use would not have to satisfy the tests established by Provincial policy, and particularly the 'no negative impact' test. Instead, the intent of the policy is to also require the demonstration of 'net gain', in addition to demonstrating 'no negative impact', with the demonstration of 'net gain' being based on a culmination of progressive and final rehabilitation of the proposal and/or other measures initiated by the proponent prior and/or during the extraction operation. The proposed Policy Framework in this Discussion Paper builds upon this existing direction in the ROP.

The 2005 PPS does not use the words "*net gain*". However, Section 2.1.2 of the PPS states that:

"The diversity and connectivity of natural features in an area, and the long-term ecological function and bio-diversity of natural heritage systems should be maintained, restored or, where possible, improved, recognizing linkages between and among natural heritage features and any areas, surface water features and groundwater features."

This PPS section introduces the concept of enhancement by stating that the ecological function and biodiversity of natural heritage systems should be maintained and that linkages between and among natural heritage features and areas, surface water features and groundwater features should be improved, where possible. In addition, Section 2.1.4 of the PPS indicates that within certain features where development and site alteration may be considered, it has to be "*demonstrated that there will be no negative impacts on the natural features or the ecological functions*". Similarly, Section 2.2.2 of the PPS indicates "*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 be protected, improved or restored.*"

Section 4.3.2.3 of the Greenbelt Plan contains a number of criteria which require that the applicant demonstrates how the water resource system will be protected or enhanced, how connectivity be maintained before, during and after the extraction, how the operator will replace any habitat that would be lost from the site with equivalent habitat on another part of the site or on adjacent land and how the water resource system will be protected or enhanced. The reader is then directed to Section 4.3.2.5 and it is stated within Sub-section 2 that:

"The health, diversity and size of these key natural heritage features and key hydrologic features will be maintained or restored and, to the extent possible, improved to promote a net gain of ecological health."

In addition, there are a number of policies in the Greenbelt Plan that encourage and require rehabilitation as soon as possible.

Collectively, both the PPS and the Greenbelt Plan support enhancements of the natural heritage system wherever possible and in the case of the Greenbelt Plan, require that a net gain of ecological health be promoted "to the extent possible". On this basis, there is a clear requirement in both Provincial documents that natural heritage features and functions have to be enhanced in some way, which implies net gain. However, the Greenbelt Plan indicates that net gain should be promoted 'to the extent possible', which suggests that there are a range of possibilities available to implement that policy direction.

At the present time, although there is a considerable amount of Provincial Policy direction on this issue, there has been no direction given on how to determine what is meant by 'net gain of ecological health'. In principle, the concept of net gain implies that the ecological health, natural feature and/or ecological function is somehow enhanced at some point in the future as a result of specific actions being undertaken by a landowner/developer or potentially, public authorities.

Another key component is the assessment of when net gain has occurred. To a large extent, given the very nature of a mineral resource extraction operation, achieving net gain in the short term may be very challenging if not impossible. Historically, the rehabilitation process was relied upon by the Province as the means to restoring to some extent, the lands to a natural state after extraction has ceased. In some cases, depending on the nature of the resource operation, rehabilitation sometimes will not commence for a considerable number of years and it would be some time before restoration actually occurs. It is for this reason that the Greenbelt Plan now requires progressive rehabilitation and the minimization of the amount of disturbed area at any one time.

The new Provincial policy direction implies that net gain will occur sooner rather than later. This means that there should be enhancements (to be defined) in the short term and in the longer term. While defining enhancements in the longer term is relatively straightforward, it is the short-term enhancements and their definition that becomes the most challenging.

The draft Policy Framework presented in this Discussion Paper is an attempt to establish a policy framework for discussion purposes. It is recognized that a considerable amount of discussion will be required through 2009 on how net gain is to be demonstrated and how it is to be measured.

2.3 PROPOSED DIRECTIONS

The Directions below are intended to provide the basis for the Policy Framework described in Section 2.4 of this report. It is noted that the Directions presented below and the Policy Framework presented in Section 2.4 are intended to be read together as parts of an overall policy framework.

	PART A - DIRECTIONS	BASIS
1	Recognize that as much of the mineral aggregate resources as is realistically possible shall be made available as close to markets as possible, provided that extraction occurs in a manner that minimizes social, environmental and human health impacts.	The Region is required to establish this planning principle by Provincial policy.

	PART A - DIRECTIONS	BASIS
2	Recognize that there is a need to ensure that the consideration of how natural heritage systems and groundwater and surface water features can be enhanced during and following extraction is key to managing resource use in a manner that minimizes environmental impacts.	This Direction establishes the basis for requiring the demonstration of net environmental gain when considering new applications.
3	Recognize that the resource industry in Halton does contribute to the Regional economy and that locating resource areas close to market assists in ensuring that transportation costs do not have a significant impact on the price of the finished product.	This Direction recognizes the existence of a viable industry in Halton and the economic benefits of locating the resource close to market.
4	Map resource areas that are net of 'pre-emptive' constraints that identify where resources are located and which may as a result, be the site of extraction operations in the future.	Including mapping in the Official Plan will recognize that resources are present in the Region and that there will be continued demand for these resources.
5	Preclude the establishment of uses in identified resource areas that may have an impact on existing or future operations, <u>unless</u> it can be demonstrated that resource use is not feasible, or if the alternative land use serves a greater long term public interest, or if the use is ordinarily permitted in the underlying land use designation.	Precluding alternative uses is Provincial policy, unless it can be demonstrated that the alternative use can meet the tests established by Provincial Policy.
6	Develop policies which indicate that it is the Region's intent to direct resource uses to lands that are not within the 'core area' component of the natural heritage system as a first principle.	The intent of this Direction is to support the intent of the Region to establish a permanent Natural Heritage System in the Region. It is also recognized that consideration will have to be given to applications within certain components of the natural heritage system provided that the 'no negative impact' and 'net environmental gain' tests are satisfied.
7	Develop partnerships with agencies and others to carry out the work required to identify, study and improve our understanding of the natural heritage systems and groundwater and surface water features in the Region and beyond, to improve our common understanding of the impacts of extraction and how they can be minimized and mitigated and how they may be impacted by extraction.	The information base can always be improved so that more informed decisions can be made.

	PART A - DIRECTIONS	BASIS
8	Develop policies and work with industry and the agencies on the establishment and continuous updating of protocols that are designed to minimize the social, environmental and human health impacts of extraction in the short and long terms.	There is a need to apply current knowledge and best practices wherever possible to ensure that the social and environmental impacts associated with aggregate extraction are always minimized.
9	Develop policies that provide the basis for the factoring in of the amount, nature and type of truck traffic now and in the future into Region-wide transportation planning processes to minimize the social, environmental and human health impacts of the use of area roads by trucks carrying the aggregate extracted from operations in the Region and in adjacent areas.	The potential impacts of truck traffic are significant and there is a need to factor this type of truck traffic into long term transportation plans.
10	Develop policies that provide the basis for the establishment of a planning process that is intended to require the submission of as much relevant information as possible, in the context of an application, to understand and consider the social, environmental and human health impacts of a proposed resource use and how those impacts can reasonably be mitigated.	Establishing the rules up front are key to obtaining the information required to determine conformity and consistency with Regional and Provincial policy frameworks.
11	Develop policies and partnerships with industry, agencies and the public that provide the basis for establishing a monitoring process following the issuance of a license to consider and deal with, as appropriate, operational issues that have off-site impacts, the implementation of adaptive management plans, rehabilitation efforts and the timing and nature of enhancements to the natural heritage system and groundwater and surface water features.	The Region's current focus is on the approval process. There is a need to be involved through the life of a license to ensure that the goals and objectives of the Regional Official Plan and up to date technologies and strategies are adhered to and implemented in a timely and effective manner.
12	Develop standards for Regional public works that require the use of aggregate mixed with recycled materials in the future and encourage, in partnership with local municipalities, the use of recycled materials for public and private projects.	Leading by example to reduce reliance on 'virgin' aggregates is in the public interest.
13	Develop policies and incentive programs that encourage the development of programs that provide the private sector with incentives (financial and otherwise) to utilize recycled materials in private sector projects.	Encouraging the private sector to reduce their need for aggregates will reduce demand for 'virgin' aggregate.

	PART A - DIRECTIONS	BASIS
14	Include mapping of potential shale resource areas in the Regional Official Plan that take into account a number of physical and location related constraints, the location of potential shale resource areas outside of the Region and the extent to which alternative land uses may serve a greater long term public interest.	Current mapping identifies an extensive area that may be suitable for shale resource use. There is a need to reduce the size of the areas affected.
15	Include mapping as an Appendix to the Regional Official Plan that identifies Regional and local roads in the rural (non-urban) area used by trucks accessing existing licensed operations.	This is one of a series of steps that are intended to improve general knowledge about the nature, type and location of potential impacts resulting from extraction.
16	With respect to permitted uses, develop policies that permit a mineral aggregate operation as defined by Provincial policy and associated uses, provided such associated facilities are clearly associated with the principal use of the lands for extraction purposes, designed to be temporary and located in a manner that does not affect or delay the quick rehabilitation and/or enhancement of the site in accordance with an approved rehabilitation plan and enhancement plan.	There is a need for clarity with respect to associated uses to ensure that extraction is truly an 'interim' use.
17	Develop an aggregate policy framework that applies the policies that are specific to aggregate resources and which complement and/or support the Region's emerging policy framework on an enhanced Natural Heritage System in the Greenbelt Plan on a region-wide basis, while recognizing that no policy in the Region of Halton Official Plan applying to lands within the Greenbelt Plan area can be more restrictive than a policy dealing specifically with aggregate extraction in the Greenbelt Plan.	The Greenbelt Plan contains the most modern and up-to-date policies on aggregates and it should be applied on a Region-wide basis.
18	Develop Official Plan policies that requires that applications be supported by studies that are based on predictable, measurable, objective effects on people and the environment, with such studies being based on Provincial standards, regulations and guidelines, where they exist and which consider and identify methods of addressing the anticipated social, environmental and human health impacts of the proposed extraction activity and related truck movements.	The context for the approval process needs to be spelled out.

	PART A - DIRECTIONS	BASIS
19	Develop Official Plan policies that recognize that while an application to expand an existing licensed area is to be considered on its own merits, the combined impact of the proposed expansion and the existing operation shall also be considered in the context of the review of the application.	Many new licenses function as expansions to existing operations. Combined impacts need to be considered.
20	Develop Official Plan policies that establish 'net environmental gain' as a key planning principle to be considered in the context of every application, with net environmental gain meaning that the ecological functions of lands within the Region of Halton natural heritage system will be enhanced in both the short term (less than 10 years) and the longer term as a result of the approval of an application to establish a new or expanded mineral aggregate extraction operation. For the purposes of this definition, enhancement is not the same as "replacement" or "no net loss" since improved ecological functions is the intended end result. In addition, the demonstration of 'net environmental gain' is not meant to imply that proponents are not required to demonstrate 'no negative impact' in accordance with the PPS.	This concept is already included in the Region of Halton Official Plan and is being expanded.
21	Develop Official Plan policies that provide the basis for establishing limits on the maximum allowable disturbed area within an approved pit or quarry and further provides for the progressive and continual rehabilitation of the licensed area.	This is a requirement of the Greenbelt Plan and will be applied on a Region wide basis
22	Develop Official Plan policies that require rehabilitation plans for all existing and new extraction operations be monitored and undergo a comprehensive review every 5 years to ensure that the most up to date policies and rehabilitation techniques are being used.	The Aggregate Resources Act does not enable the Region to require this review. However, the MNR at its discretion can require that such plans be updated.
23	Develop Official Plan policies that require designated aggregate haul routes be designed and built to arterial road standards (where feasible and at the discretion of the Region and local municipalities) and any improvements to roads deemed necessary through the approval of a licence under the Aggregate Resources Act be paid for by the benefiting aggregate operator.	Intent is to establish the basis for the upgrading of roads to an appropriate standard when required.

	PART A - DIRECTIONS	BASIS
24	Commit staffing resources to continuously monitor the conditions of approval over the long term as necessary and recommend changes to the conditions of license to the Ministry of Natural Resources. Staff shall report annually to Council on the status of each licensed operation in the Region and on matters such as adherence to the conditions of approval, the results of the implementation of the adaptive management plans and other matters as approved by the Ministry of Natural Resources through the issuance of an Aggregate Resources Act license.	Establishes the basis for being involved in the post-approval process and for the long term.

2.4 PROPOSED POLICY FRAMEWORK

Below is the proposed policy framework along with a brief discussion on the rationale or basis of each section.

	PART B - LOCATION	BASIS
1	All areas currently designated for extraction purposes in the existing Region of Halton Official Plan will continue to be so designated until the license applying to the lands has been surrendered.	Recognizes existing licenses.
2	Lands that are the site of primary and secondary sand and gravel resources and selected bedrock primary resources (limestone) as mapped by the Ministry of Northern Development and Mines (2009) will be identified and shown on a schedule in the Official Plan as an 'overlay' designation, with the land area so identified being net of the 'pre-emptive' constraints listed in Clause #3 below;	Identifies source of mapping, which is recent.
3	Lands that are the site of the following physical or policy constraints will (if the mapping is available) not be included in the resource area overlay designation described in Clause #2 above since they are considered to be 'pre-emptive' constraints: <ul style="list-style-type: none"> a. Significant wetlands (with 'significant' in this context as being as defined in the 2005 PPS); b. Significant habitat of endangered species and threatened species (with 'significant' in this context being as defined in the 2005 PPS and differently in the 2005 Greenbelt Plan); c. Significant woodlands on lands subject to the Greenbelt Plan (with 'significant' in this context being as defined in the 2005 Greenbelt Plan), 	Identifies 'pre-emptive' constraints that will be 'netted out' of resource areas. Not all 'pre-emptive' constraints are mapped.

	PART B - LOCATION	BASIS
	<p>unless the woodland is occupied by young plantation or early successional habitat (it is noted that the expansion of an existing mineral aggregate operation into a significant woodland is permitted by the Greenbelt Plan provided the decision is consistent with the Provincial Policy Statement);</p> <p>d. Lands within 200 metres from the brow of the escarpment;</p> <p>e. Wetlands in the Niagara Escarpment Plan (NEP) Area as defined in Appendix 2 to the NEP, as amended;</p> <p>f. Provincially Significant and Regionally Significant Life Science ANSI in the Niagara Escarpment Plan (NEP) Area as defined in Appendix 2 to the NEP, as amended (it is noted that minor encroachments are permitted);</p> <p>g. Public lands in the parks and open space system in the Niagara Escarpment Plan (NEP) Area (as long as they are 'public' lands);</p> <p>h. Escarpment Protection Area designation in the Niagara Escarpment Plan (NEP) Area;</p> <p>i. Escarpment Natural Area designation in the Niagara Escarpment Plan (NEP) Area;</p> <p>j. Lands within urban areas, hamlets and rural clusters according to the Region and local Official Plans;</p> <p>k. Minor urban centres in the Niagara Escarpment Plan (NEP) Area; and,</p> <p>l. Lands designated for country or estate residential use in local Official Plans.</p>	
4	<p>Lands that may be identified as being the site of certain sensitive natural heritage and hydrological features, in addition to those areas identified in Clause #3 through the development of a Region-wide natural heritage system being developed as part of the Sustainable Halton planning process, may be added to the list of 'pre-emptive' constraints in Clause #3 above once further information is available.</p>	<p>This policy is a 'placeholder' that recognizes that a Natural Heritage System is in the process of being developed in the Region.</p>
5	<p>At the time of the preparation of this document, Provincial mapping showing areas where shale resources that are within 15 metres of ground level</p>	<p>The amount of shale resource area identified would have a significant impact on future</p>

	PART B - LOCATION	BASIS
	indicate that extensive land areas exist within both Halton Hills and Milton that are potentially viable for extraction. Given the nature of the resource, in terms of what it is used for and how much is required to meet expected demand, there is ultimately a need to make a determination on how much land should be 'reasonably' protected for resource use, given the location of the resource in an area where over the long term, urban development is anticipated in principle.	urban development in the primary study area if it were all protected.
6	Shale resource areas identified in accordance with Clause #5 should be identified and shown on a schedule in the Official Plan as an 'overlay' designation, with the land area so identified being net of the applicable 'pre-emptive' constraints listed in Clauses #3 and # 4 above.	To ensure that the same pre-emptive constraints are considered.
7	In addition to the above, Regional and local roads in the rural (non-urban) area used by trucks accessing existing licensed operations shall be identified on a map attached to the Official Plan as an appendix. Changes to the appendix will not require an amendment to the Official Plan.	Assists in helping the public understand where truck traffic may occur. The map will also indicate that the map is not static, and that additional roads may be used in the future.

	PART C - PERMITTED USES	BASIS
1	A 'mineral aggregate operation', as defined in subsection a) of the 2005 PPS definition for the term is to be permitted on lands designated for extraction purposes;	Relies upon PPS definition.
2	A full range of 'associated facilities' as set out in subsection c) of the 2005 PPS definition for the term 'mineral aggregate resources', is to be permitted on lands designated for extraction purposes, provided such 'associated facilities' are: <ul style="list-style-type: none"> a. clearly associated with the principal use of the lands for extraction purposes; b. designed to be temporary and to not be utilized after extraction has ceased; and, c. located in a manner that does not affect or delay the quick rehabilitation and/or enhancement of the site in accordance with an approved rehabilitation plan and enhancement plan. 	Provides limits on the nature of associated uses to ensure intent of PPS is being met.

	PART C - PERMITTED USES	BASIS
3	The use of lands that are below the water table for associated uses that may have a negative impact on the quality and quantity of water are prohibited.	Such uses are to be directed elsewhere.
4	<p>A range of public and private open space/recreational uses will be permitted as of right on lands designated for extraction purposes without the need to amend the Region of Halton Official Plan, provided:</p> <ul style="list-style-type: none"> a. such uses were contemplated in advance as part of an approved rehabilitation plan; b. the lands are not planned to be rehabilitated for agricultural use; c. the public open space/recreational use is supported in a Region-wide open space/recreational master plan; and/or, d. the impacts of a private open space/recreational use have been addressed as part of the initial approval process. 	Provides the basis for thinking about 'after uses', which should be planned for in advance and when the application for resource use has been submitted. The preparation of a master plan up front is encouraged.
5	On lands within the 'overlay' designation, it is not the intent of the Plan to limit the use of the lands for other uses in accordance with the policies of the underlying and principal land use designation.	Recognizes that the 'overlay' designation only has an impact on land use when 'development' as defined by the PPS is proposed.
6	<p>The proponent of any non - mineral aggregate resource use proposed for lands within the resource 'overlay' designation and requiring an Amendment to the Region of Halton and/or local Official Plan will have to demonstrate that:</p> <ul style="list-style-type: none"> 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. 	Clauses a, b and c are from the PPS.

	PART D - APPROVAL PROCESS	BASIS
1.	The policies in the Greenbelt Plan that deal with aggregate extraction in Section 4.3.2 of the Greenbelt Plan are deemed to represent 'minimum standards' and shall be applied to every application in the Region of Halton.	Intended to set the stage for applying Greenbelt Plan policies in the NEP. This clause to be read in conjunction with Clause #2 below.
2.	The Region recognizes that no policy in the Region of Halton Official Plan applying to lands within the Greenbelt Plan area can be more restrictive than a policy dealing specifically with aggregate extraction in the Greenbelt Plan. Notwithstanding the above, the Region can include policies in the Official Plan dealing with any aggregate - related matter not dealt with in the Greenbelt Plan in a manner that is consistent with the 2005 Provincial Policy Statement;	Greenbelt Plan requirement.
3.	The Natural Heritage System established by the Region of Halton as part of the Sustainable Halton planning process is deemed to be subject to the natural heritage and water resource system policies as they apply to aggregate extraction as set out in Section 3.2 of the Greenbelt Plan;	Applies the framework established by the Greenbelt Plan to lands outside of the Greenbelt Plan. It is recognized that certain modifications to this approach may need to be considered.
4.	The policies contained within Section 3.2 (Natural System) and 4.3.2 (non-renewable resources) of the Greenbelt Plan will not be reproduced in this document;	For the sake of brevity.
5	The Joint Agency Review Team (JART) process shall be enshrined in the Region of Halton Official Plan. The Official Plan will clearly indicate that it is the intent of the JART process to: <ul style="list-style-type: none"> • ensure that all information needs are identified up front before detailed technical work in support of an application is submitted; • ensure that all relevant information is collected in accordance with current best practices to address the technical aspects of every application; • provide the basis for the formalized peer review of all technical reports; • provide a forum for the exchange of ideas and opinions on how the social and environmental impacts of extraction can be minimized in the short, medium and long terms; 	Intended to identify current process and intent. Intent is not to create a parallel decision making process.

	PART D - APPROVAL PROCESS	BASIS
	<ul style="list-style-type: none"> • identify viable options that will satisfy the objectives of the Region of Halton Official Plan respecting net environmental gain, and, • identify current best management practices that are derived from internationally recognized standards of practice that could be applied to the proposed use. 	
6	The Region of Halton Official Plan will make it clear that it is not the intent of the JART process to result in the making of a formal JART recommendation. Instead, it is the role of every agency that is part of the JART process to submit their comments and recommendations. In addition, the JART process will be required to be open to the public at key points in the review process to afford members of the public to comment on the technical aspects of any proposal. It would not be the intent of this component of the JART process to serve as a forum where the merits of establishing the principle of the use is debated - the more appropriate forum for this discussion is at Regional Council;	Further clarification on the role of JART.
7	Any application shall be supported by studies that are based on predictable, measurable, objective effects on people and the environment. Such studies will be based on Provincial standards, regulations and guidelines, where they exist and will consider and identify methods of addressing the anticipated social, environmental and human health impacts of the proposed extraction activity and related truck movements;	Provides basis for how applications will be reviewed.
8	The mapping out of the full life cycle of the proposed pit or quarry shall provide the basis for the preparation and consideration of any application;	This is current practice. However, after use and nature of rehabilitation required to be considered up front.
9	While an application to expand an existing licensed area is required to be considered on its own merits, the combined impact of the proposed expansion and the existing operation shall be considered in the context of the review of the application. In addition, improvements and/or enhancements to site plans and rehabilitation plans that exist for the existing licensed area shall be considered in the context of the review process.	Recognizes that expansions are common.
10	All applications shall be supported by information that address the impact of the operation of the proposed extraction use on, among other things:	Intended to identify matters to consider.

	PART D - APPROVAL PROCESS	BASIS
	<ul style="list-style-type: none"> a. the natural heritage systems and features and ecological functions on the site and in the area that may be potentially impacted; b. the endangered and threatened plant and animal species that may be located in the area; c. nearby communities and adjacent land uses; d. agricultural resources and activities; e. the quality and quantity of groundwater and surface water; f. the archaeological, built or cultural heritage resources in the area; g. significant geologic formations on the site and in the area; h. the groundwater recharge and discharge functions on the site and in the immediate area; i. surface water features in the area; j. nearby wells used for drinking water purposes and agricultural or commercial purposes; and, k. the visual character of the area. 	
11	<p>For the haul route proposed, information shall be submitted that demonstrates that:</p> <ul style="list-style-type: none"> a. The haul route is, or can be made, safe and capable of handling the volume of traffic proposed; b. The selection and design of the proposed haul route has taken into consideration and addressed impacts on existing and permitted sensitive land uses along the proposed haul route; c. The design of the haul route has taken into consideration the existing road right-of-way characteristics including existing trees and vegetation within the road right-of-way, wood, wire, stump and stone fence lines within or adjacent to the right-of-way or other historical landscape remnants and where practical has identified means by which such features will be retained in order to minimize the impacts on the character of the area; 	Establishes basis for review of truck traffic.

	PART D - APPROVAL PROCESS	BASIS
	<p>d. The design of the haul route has taken into consideration the physical characteristics of the potential route including road classification, load limits, road surfacing and the identification of any physical constraints to heavy truck traffic, such as vertical or horizontal curves, sight lines or shoulders and the means to address any deficiencies; and,</p> <p>e. The design of the haul route has taken into consideration the traffic impacts (both operational and physical) resulting from the truck traffic generated by the proposed operation, including impacts on road structure, traffic flow and safety and the mitigation measures that will be employed to address these impacts.</p>	
12	The Region will require the upgrading of any road to be utilized as a haul route to an 'arterial' road as defined by the Official Plan, provided the required upgrading is essential and the social, environmental and human health impacts are minimized.	Establishes the basis for the upgrading of roads, on a conditional basis.
13	The selection of a haul route that has the least impact when compared with other haul routes does not automatically translate into an approval for that haul route. Instead, it still has to be demonstrated that the social, environmental and human health impacts of the use of the selected route as a haul route have been appropriately minimized. There may be circumstances where this cannot occur, meaning that an appropriate means of access to the proposed pit or quarry does not exist.	Recognizes that it may not be possible to mitigate impacts.

	PART E - CRITERIA	BASIS
1.	<p>Prior to the approval of an application, the applicant shall demonstrate that:</p> <ul style="list-style-type: none"> a) Vulnerable surface and ground water, sensitive surface water features and sensitive ground water features, and their hydrologic functions are protected, improved or restored; b) Potential negative impacts, with negative impact in this context being as defined in sub-section a) of the definition of 'negative impacts' in the 2005 Provincial Policy Statement, on the quality and quantity of water are minimized, taking into account potential cross-jurisdictional and cross-watershed impacts; c) there is no negative impact on significant natural heritage features or related ecological functions, with 'negative impact' in this context being as defined in sub-section c) of the definition of 'negative impacts' in the 2005 Provincial Policy Statement; d) net environmental gain will occur, in accordance with Section F below; e) as much of the site as possible will be rehabilitated by establishing or restoring natural self-sustaining vegetation or to agricultural use, if the lands are located in a prime agricultural area, or an alternative use, provided such an alternative use is considered at the time the application is submitted; and, f) other environmental, social and human health impacts resulting from the use itself and relating truck activity, such as noise, dust, odour and visual impacts are minimized. 	Establishes the tests to be considered
2	The added or overall impact of the proposed operation on the items listed in Clause # 1 shall also take into account the impacts from existing operations in the immediate area.	Intended to ensure that combined impacts are considered.

	PART E - CRITERIA	BASIS
3	In considering the added impact of the new operation to existing known impacts, the Region shall ensure that mitigation measures intended to lessen the added impact are reviewed and applied as required. During the course of this review, phasing of extraction within the proposed site shall be considered as one means to minimize the combined impacts of the proposed and existing operations on the general area.	Provides for phasing based on the determination of impacts.
4	Key performance indicators, which are intended to track how the social, environmental and human health impacts of the proposed use are minimized throughout the life of the operation shall be identified up front and applied as conditions of approval.	Establishes the basis for monitoring and the consideration of best practices.

	PART F - NET ENVIRONMENTAL GAIN	BASIS
1	The demonstration of net environmental gain in of itself is not intended to relieve any proponent from having to demonstrate how the proposal will have no negative impact in accordance with and as defined in Provincial policy.	Intended to differentiate between the two concepts.
2	The principles of net environmental gain are only to be applied if the proposal affects the Region's natural heritage system and if it has been determined that the site will be rehabilitated to function as part of the Region's natural heritage system.	Policy intended to be applied if proposal affects NHS.
3	The Official Plan shall define net environmental gain as follows: Means that the ecological functions of lands within the Region of Halton natural heritage system will be enhanced in both the short term (less than 10 years) and the longer term as a result of the approval of an application to establish a new or expanded mineral aggregate extraction operation. For the purposes of this definition, enhancement is not the same as 'replacement' or 'no net loss' since improved ecological functions is the intended end result. Enhancements may include: <ul style="list-style-type: none"> a) increases in the spatial extent of the Natural Heritage System; b) increases in biological and habitat diversity; c) enhancement of ecological system function; d) enhancement of wildlife habitat; 	Definition and examples are provided to assist with interpretation. The quantification of net environmental gain is a consideration and needs to be further discussed.

	PART F - NET ENVIRONMENTAL GAIN	BASIS
	<ul style="list-style-type: none"> e) enhancement of natural succession; f) creation of wetlands or woodlands; g) enhancement of riparian corridors; h) enhancement of groundwater recharge or discharge areas; and, i) establishment or enhancement of linkages between significant natural heritage features or areas. 	
4	<p>Over the long term, it is the intent of the Region to support the enhancement of:</p> <ul style="list-style-type: none"> a) lands that are not within the Natural Heritage System in a manner that would support their inclusion into the Natural Heritage System; b) existing linkages outside of the Natural Heritage System in a manner that enhances their ecological function and the contribution the linkage plays in supporting the Natural Heritage System; and, c) the lands under extraction and adjacent lands in a manner that supports their inclusion into the Natural Heritage System, in a phased manner both during and after extraction. 	Examples of long-term enhancements.
5	<p>Over the short term, it is the intent of the Region to support the enhancement of:</p> <ul style="list-style-type: none"> a) lands that are already within the Natural Heritage System; b) existing linkages within the Natural Heritage System in a manner that enhances their ecological function and the contribution the linkage plays in supporting the Natural Heritage System; and, c) lands that are not within Natural Heritage System in a manner that would support their inclusion into the Natural Heritage System in the short term. 	Examples of short-term enhancements.
6	Any enhancement plan has to be approved prior to the issuance of a license under the Aggregate Resources Act.	Provides for the consideration of enhancements up front.

	PART F - NET ENVIRONMENTAL GAIN	BASIS
7	Enhancements shall be initiated as soon in the approval process as possible, continue through the extraction phase and beyond as required;	Provides the basis for the initiation of enhancements during extraction.
8	The replacement, without any enhancement, of the natural heritage features that are permitted to be considered in the context of an application and related ecological functions on the lands to be utilized for extraction purposes would not demonstrate net environmental gain.	Makes it clear that replacement is not enough.
9	Lands that are proposed for extraction, but which are outside of the Natural Heritage System, may fulfill both the short and the long term components of net environmental gain, if they are planned to be progressively enhanced as part of the rehabilitation plan and included within the natural heritage system;	Provides additional options.
10	Where a mineral aggregate operation has been approved on the basis that net environmental gain will occur, subsequent applications for new or expanded mineral aggregate operations in the same vicinity may build upon existing and approved net environmental gain measures;	Allows for the recognition of existing enhancement plans on a go forward basis.
11	While short-term enhancements shall be initiated as soon as reasonably possible after the commencement of excavation, it is acknowledged that the full benefits of the enhancements will be over the longer term.	Recognizes that the benefits of enhancement may not be apparent in the short term.
12	Off-site candidate sites for enhancement, if necessary, can be considered. These sites may include other lands owned or controlled by the applicant, lands owned by the Province, Region, Conservation Authority or municipality. Other private lands may also be considered, subject to an appropriate agreement to achieve the enhancements. Candidate sites may be identified in advance by the Region;	Provides the basis for the consideration of other options.
13	Agreements that have the effect of implementing a net environmental gain strategy and enhancement plan shall be entered into as a condition of approval between the Region of Halton and local municipalities and the proponent. It is recognized that these agreements may not necessarily be codified as a condition of the site plan approved by the Ministry of Natural Resource pursuant to the Aggregate Resources Act.	Establishes intent to require agreements.

	PART G - REHABILITATION	BASIS
1.	The preparation of a rehabilitation plan that reflects the nature of the proposed operation and type of operation shall be prepared in advance and prior to the approval of any application. Any rehabilitation plan shall include a plan which implements net environmental gain.	Requires the consideration of the full life cycle of the operation.
2.	It is recognized that limestone quarries, as a result of their size and depth, cannot be rehabilitated in a manner that restores the physical landscape to its pre-existing state. On this basis, every effort will be made to ensure as part of the rehabilitation plan that the natural heritage features and functions in the area affected are maintained, enhanced or restored as a consequence of the rehabilitation plan. It is recognized that pre-existing natural heritage features may not be restored in the same location as they are at the time of the application. Instead, the focus of the rehabilitation plan will be on the restoration and enhancement of ecological function.	Recognizes the nature of limestone quarries.
3.	The review of rehabilitation plans applying to every licensed pit or quarry in the Region shall be encouraged every five years following the approval of this Plan to ensure that the rehabilitation plan reflects the best management practices that are current at that time and are recognized standards of practice. The principles of net environmental gain shall be applied to the review of any rehabilitation plan at five-year intervals. It is recognized that the support of the Ministry of Natural Resources will be required to review rehabilitation plans on a regular basis.	This is an 'encouragement' policy that reflects the Region's intent to consider updated information and best practices throughout the entire life cycle of the operation.
4.	Agreements that provide for rehabilitation in accordance with an approved rehabilitation plan shall be required between the Region and the local municipalities and licensees. These agreements are intended to have the effect of providing for the review of rehabilitation plans with licensees at five - year intervals.	This clause is to read in conjunction with Clause 3 above.
5.	The overall intent of the Region is that rehabilitation plans will result in a circumstance where man-made intervention is not required in perpetuity to implement the rehabilitation plan. In this regard, all options with respect to achieving this long-term objective should be explored in the context of the rehabilitation plan. The approval of plans that require man-made intervention shall be the exception and not the rule.	Intended to implement PPS intent that resource use is an interim use.

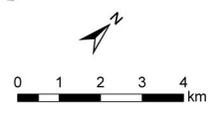
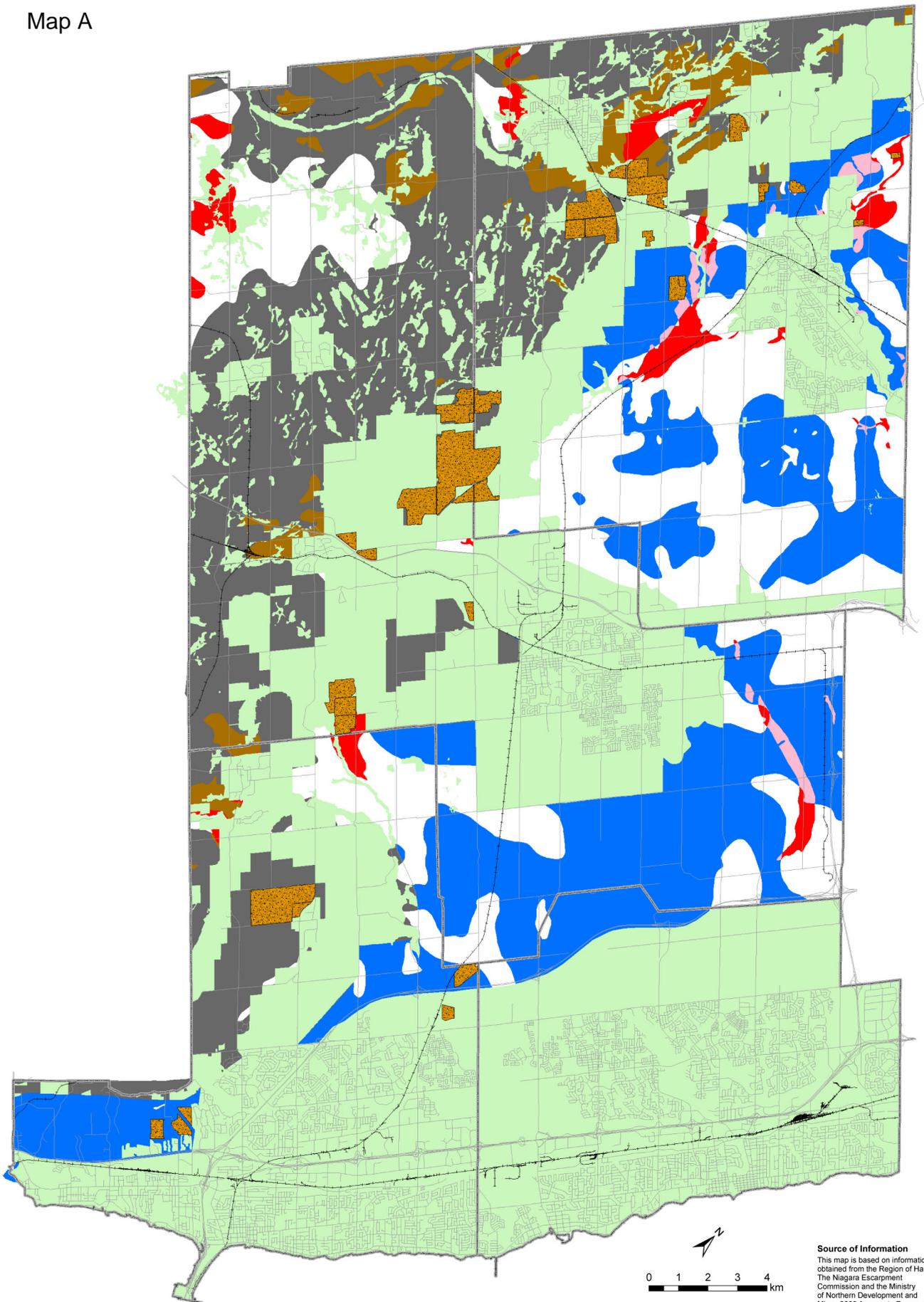
	PART G - REHABILITATION	BASIS
6.	The importation of fill for the purposes of rehabilitation shall be strictly controlled and monitored to ensure that the type of fill being imported is free of contaminants and supports an approved rehabilitation plan.	Intended to provide basis for oversight.
7	Rehabilitation back to agriculture may be required if extraction occurs on prime agricultural lands. However, rehabilitation in this manner may not be feasible in cases where below water table extraction occurs.	Intended to reflect PPS policy and feasibility of rehabilitation in certain cases.

	PART H - CONDITIONS OF APPROVAL	BASIS
1.	Establish the means by which social and environmental impacts will be minimized;	Identifies possible condition.
2.	Identify what new infrastructure is required to minimize impacts;	Identifies possible condition
3.	Establish what improvements to existing infrastructure are required and by when;	Identifies possible condition
4.	Identify when certain mitigation strategies and infrastructure is required;	Identifies possible condition
5.	Specify how extraction could be phased to minimize impacts;	Identifies possible condition
6.	Specify the amount of disturbed area to be permitted at any one time;	Identifies possible condition
7.	Require the monitoring of the operation;	Identifies possible condition
8.	Specify requirements for ongoing, management, monitoring and implementation of an adaptive management plan;	Identifies possible condition
9.	Specify the requirements for ongoing public consultation and settling of disputes and concerns;	Identifies possible condition
10.	Ensure no public financial liability during and after extraction and rehabilitation where active continual management is required;	Identifies possible condition
11.	Evaluate final rehabilitation in relation to after uses and benefits to the public at large;	Identifies possible condition
12.	Require the application of 'best management practices' throughout the operation; and,	Identifies possible condition

	PART H - CONDITIONS OF APPROVAL	BASIS
13.	Require the updating of rehabilitation and enhancement plans throughout the life cycle of the operation and generally every 5 years to reflect emerging 'best practices' and respond to new information on the natural heritage and hydrological systems that may be impacted by the operation.	Identifies possible condition

	PART I - MONITORING	BASIS
1.	The Region shall establish a long-term monitoring of protocol that is designed to ensure that all approved plans are implemented through the life cycle of the pit or quarry.	Establishes Region's intent.
2.	The Region will require, as a condition of approval pursuant to the Aggregate Resources Act and/or the Planning Act, the licensee's support for long-term monitoring.	Such a condition can only be added with MNR and licensee support. Funding of monitoring to be determined.
3.	The Region, in carrying out this monitoring role will work closely with the Ministry of Natural Resources to ensure that all approved plans are implemented and are updated as required to reflect evolving best practices.	Policy establishes the need to review plans as required. It is recognized that only the MNR or licensee can initiate a change to an approved site plan under the ARA.
4.	The Region will continuously strive to improve its knowledge of the Region's natural heritage and hydrological systems to ensure that as much up to date information as is feasible is available to review the potential social, environmental and human health impacts of extraction. In addition, this information would also be utilized to support changes and enhancements to site plans and rehabilitation plans through the life cycle of a pit or quarry in the Region.	The Region needs to show leadership in this regard and assist in ensuring that the most up to date information is available, as is feasible.

Map A



Source of Information
 This map is based on information obtained from the Region of Halton, The Niagara Escarpment Commission and the Ministry of Northern Development and Mines 2009 Aggregate Resources Inventory Maps.

**Region of Halton
 Mineral Aggregate
 Resources**

Legend

- | | |
|---|---|
| ■ Sand & Gravel Resource (1328.24ha) | ■ Sand & Gravel and Bedrock Resource (2064.15ha) |
| ■ Bedrock Resource (15514.87ha) | ■ Sand & Gravel and Shale Resource (414.41ha) |
| ■ Shale Resource (14139.99ha) | ■ Primary Constraints (49390.54ha) |
| | ■ Licensed Pits and Quarries (1786.77ha) |

Primary Constraints

- NEP Natural Area
- NEP Protection Area
- NEP Publicly Owned Lands
- NEP Minor Urban Centre
- Provincially Significant Wetlands
- Urban Areas Hamlets and Rural Clusters