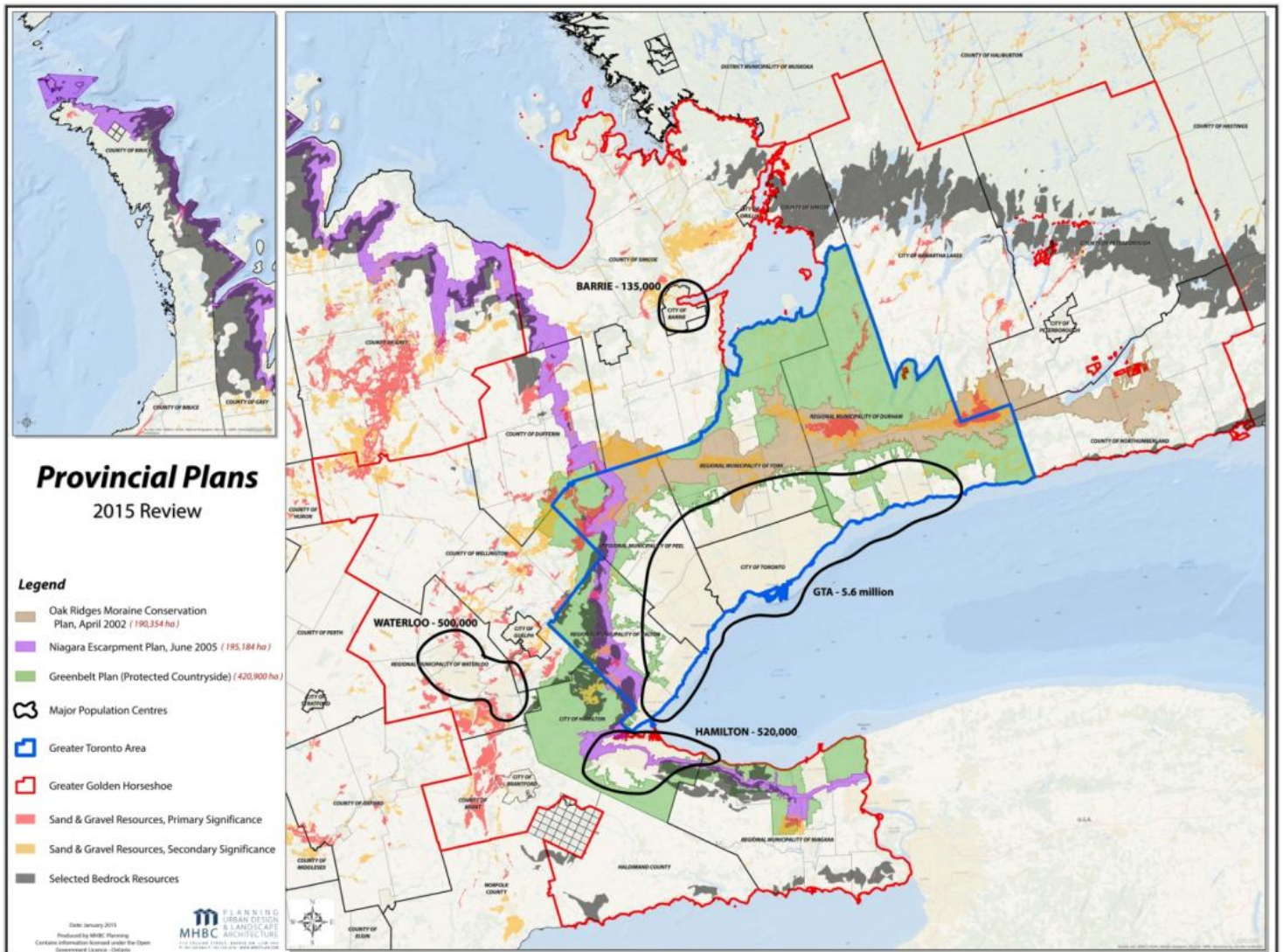


# The Future of Ontario's Close to Market Aggregate Supply: The 2015 Provincial Plan Review

## Aggregate Industry Discussion Paper



April 30, 2015

## **Recommendations**

### **Overview**

1. The public and provincial interest in close to market aggregate supply can only be achieved if Provincial Plans contain reasonable policies to make aggregate available.
2. There would be significant economic, environmental and social implications of shifting away from the close to market policy in favour of importation from long distance sources to the Greater Toronto Area (GTA) and Greater Golden Horseshoe (GGH) markets.
3. The need for revisions to the Provincial Plans should be based on implementation experiences with operations approved since each of the Plans came into effect.
4. While it is recognized that the geographic, social and economic conditions of one municipality may vary from another, there should be consistency in each Provincial Plan Area in ensuring that significant aggregate resources are made available based on reasonable and objective policies.

### **Recommendations for all Provincial Plans**

5. Fundamentally, the Provincial Plan Review should not consider any new prohibitions on consideration of aggregate extraction. The Provincial Plan Areas are the close to market aggregate resource for the GGH and are among the highest quality resources available.
6. Changes to land use designations and expansion of Provincial Plan boundaries can have major impacts on the availability of close to market resources. Decisions to expand or increase areas and designations must consider impacts on resource availability.
7. In order to avoid confusion and unnecessary complexity, the Provincial Policy Statement (PPS) should be used as the standard for those features and areas that are not unique to the Provincial Plans. As an example, the policies related to the protection and use of natural heritage, agriculture, water and aggregate resources should be consistent with the PPS.

8. The Provincial Plans should protect existing aggregate operations and their ability to expand in accordance with the PPS.
9. The designations of the Provincial Plans that contemplate extraction should continue to have an objective to provide for new licenced supply while minimizing environmental and social impacts.
10. The Greenbelt Plan is the newest of the Provincial Plans and creates an appropriate balance between environmental, agricultural, water and aggregate resources. The Greenbelt Plan includes detailed requirements that ensure sites are rehabilitated to contribute to the long-term goals of the Greenbelt. The strong fundamentals which recognize the Provincial interest in aggregate resources must be maintained and upheld.
11. In environmental areas, a higher standard for rehabilitation could be required to restore natural features and enhance biodiversity.
12. The Provincial Plans should recognize the regulated process under the Endangered Species Act and revise the applicable policies consistent with the recent changes to the PPS.
13. Municipal official plans should defer to the aggregate resource policies of the Provincial Plans to protect the provincial interest in aggregate resources, and to avoid conflicting policies and costly hearings to defend the policies of the Provincial Plans.
14. The Provincial Plans should contain policies to promote recycling of aggregate resources.
15. The extraction in significant woodlands policy should be reviewed to determine whether it is reasonable to limit extraction to young plantations and early successional habitat (Oak Ridges Moraine Conservation Plan and Greenbelt Plan).

### **Recommendations for the Niagara Escarpment Plan (NEP)**

16. Any proposal to significantly alter the balance that has been achieved in the NEP would have to be justified based on implementation experience that definitively demonstrated that the current policies were not working and there would be substantial environmental harm incurred by continuing to accommodate aggregate extraction within the Escarpment Rural Area.

17. The policy framework of the NEP is the oldest of the three Provincial Plans and therefore most in need of fine-tuning and updating to be more consistent with current terminology and practice, and applicable legislation.
18. If mapping or designation criteria changes are contemplated to the land use designations in the NEP, the impact on aggregate availability must be considered and assessed in recognition of the significance of the resource, close to market supply and relatively limited existing Escarpment Rural Areas.
19. Eliminate regulatory duplication and inefficiency by adding new policy acknowledging the Aggregate Resources Act (ARA) regulatory function. A development permit would still be required but, once issued, day to day regulation would be under the sole jurisdiction of the Ministry of Natural Resources & Forestry (MNRF) under the ARA.
20. The policies should take into consideration mitigation measures that minimize visual impacts for aggregate operations and recognize that the final rehabilitation, although a different landform, can contribute to the open landscape character of the NEP.
21. Timelines for processing aggregate applications should be prescribed consistent with the Planning Act.

### **Recommendations for the Oak Ridges Moraine Conservation Plan (ORMCP)**

22. In accordance with the ORMCP Implementation provisions, the 10-year review should include an examination of the policies prohibiting extraction in Natural Core Areas. The policies restricting extraction to above the water table in Natural Linkage Areas should also be reviewed. Areas within the Natural Core Areas and Natural Linkage Areas do not contain environmental features, and rehabilitation could enhance the lands.
23. The overall goals and objectives of the ORMCP must be considered when applying the 1.25 km natural corridor width policy. The location of Natural Core Areas and the actual use of the surrounding lands should be taken into account when assessing the 1.25 km corridor.

## **Recommendations for the Greenbelt Plan**

24. If the Province contemplates an expansion of the Greenbelt, the presence of significant aggregate resources beyond and adjacent to the existing Greenbelt Area must be considered.

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## **Introduction**

The Aggregate Industry Discussion Paper for the 2015 Provincial Plan Review was prepared on behalf of the following aggregate producers:

- Aecon
- Brock Aggregates Inc.
- Fowler Construction Ltd.
- Harold Sutherland Construction Ltd.
- Holcim (Canada) Inc. (Dufferin Aggregates)
- James Dick Construction Ltd.
- Lafarge Canada Inc.
- Miller Group
- Nelson Aggregate Co.
- R.W. Tomlinson Ltd.
- Walker Aggregates Inc.

These producers have operations throughout Ontario including within the Provincial Plan Areas and have a significant interest in the Plan Review:

- In total, the producers have over 325 licences in Ontario from Windsor to Ottawa to Sault Ste. Marie. The producers have over 15 licences in the Niagara Escarpment Plan Area, 40 licences in the Oak Ridges Moraine Conservation Plan Area and 25 licences in the Greenbelt Plan Area.
- Collectively, the producers have licenced, operated and/or rehabilitated hundreds of pits and quarries within the Provincial Plan Areas.
- These producers contribute to the economy within Provincial Plan Areas through direct and indirect employment, assessment and community contributions.

The Aggregate Industry Discussion Paper was endorsed by the Ontario Stone, Sand & Gravel Association.



## **Methodology and Approach**

This discussion paper was prepared by MHBC Planning. The conclusions and findings are based on MHBC's direct experience with over 20 pit and quarry applications in the Provincial Plan Areas and in consultation with other aggregate applicants and practitioners.

The statistics presented in this paper are based on published Government sources and data provided by the Ministry of Natural Resources & Forestry (e.g. TOARC production statistics, Provincial studies, etc.).

The review of the Provincial Plans should be based on facts and implementation experience. The review should build on established and effective principles and reflect broad public interest objectives.

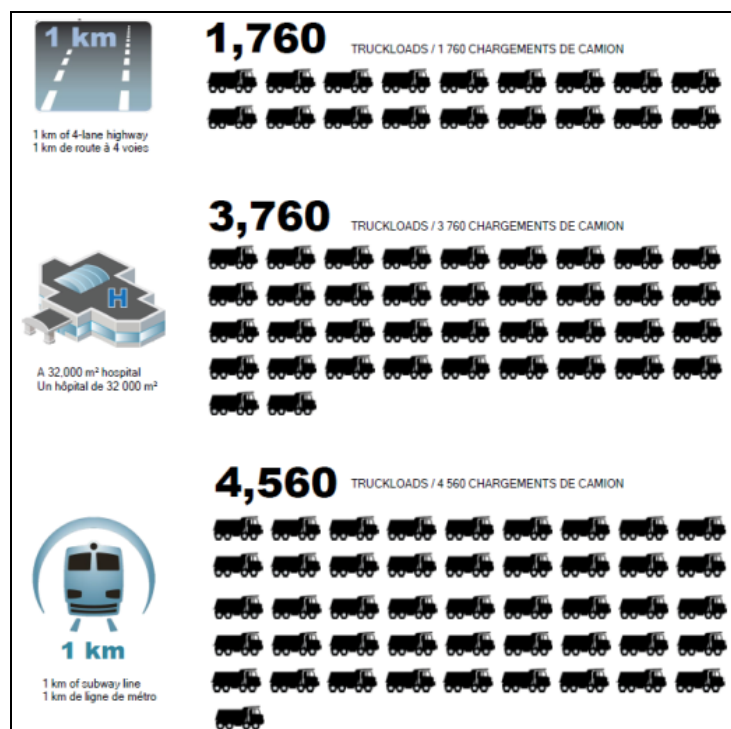
## Aggregate Resources and Provincial Plans

### Overview

Aggregate resources are literally the foundation of Ontario's economy and society. Aggregate resources include gravel, sand, clay, earth, shale, stone, limestone, dolostone, sandstone, marble, granite, rock or other prescribed material under the Aggregate Resources Act (ARA). Aggregate resources are commonly referred to as sand, gravel or crushed stone. These non-renewable resources are found in certain fixed locations in Ontario.

Aggregate resources are used to build Ontario's infrastructure including highways, roads, transit lines, hospitals, airports and other residential, institutional and industrial buildings. **Figure 1** from the Ministry of Natural Resources and Forestry's (MNRF) website identifies how much aggregate is needed to build critical elements of Ontario's infrastructure (by number of 25-tonne truckloads).

Aggregate resources are also used in manufacturing processes for iron, steel, aluminum and plastic, and are considered critical ingredients in several manufactured products such as glass, paint and pharmaceuticals.



**Figure 1** Average amount of aggregate used in infrastructure projects (each truck symbol identifies 100, 25-tonne trucks) (Source: MNRF)

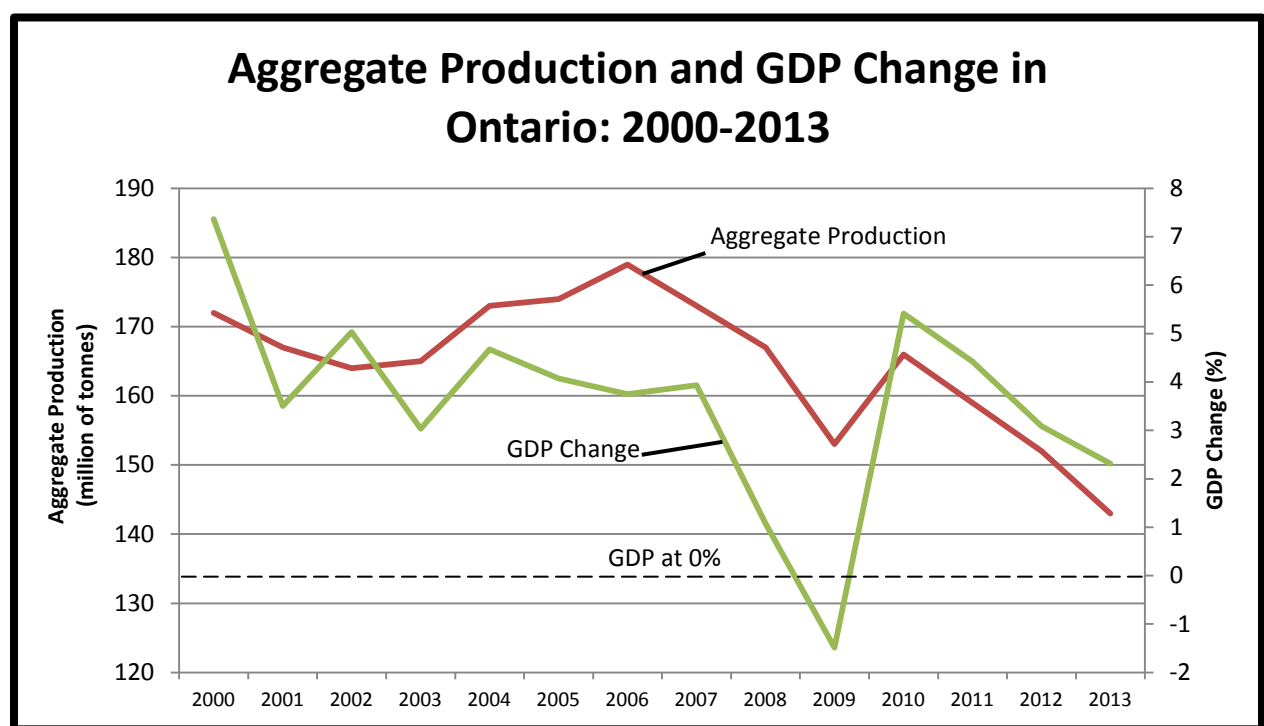
The aggregate industry is important to the economic health of Ontario. Local aggregate products support Ontario's \$37 billion construction industry allowing for the employment of 292,000 Ontarians. Ontario aggregate producers employ more than 7,000 people directly and more than 34,000 indirectly. The aggregate industry contributes an estimated \$1.6 billion of Gross Domestic Product (GDP) to the provincial economy<sup>1</sup>.

<sup>1</sup> Ontario Stone, Sand & Gravel Association

## Aggregate Production and Consumption in Ontario

In 2013, Ontario production of aggregate resources totaled approximately 143 million tonnes<sup>2</sup> which was the lowest total since 1996 (136 million tonnes). Over the last 15 years, **aggregate production in Ontario has averaged 164 million tonnes per year.**

Aggregate production is directly tied to Ontario's economy (**Figure 2**). When economic conditions in Ontario are generally favourable (as evidenced by change in Gross Domestic Product (GDP)), aggregate production is relatively high. The opposite is true when conditions are not as favourable economically as has been the case in the last few years.



**Figure 2** Aggregate Production and Change in Gross Domestic Product (GDP) in Ontario: 2000-2013

Based on research completed through the MNRF's State of the Aggregate Resource in Ontario Study (SAROS), **Ontarians use about 14 tonnes of aggregate per person per year<sup>3</sup>.**

<sup>2</sup> Aggregate production is calculated based on the amount of resources extracted and shipped from licences, permits, forestry pits and private lands not designated under the ARA. The vast majority of the total production comes from licences (92%) while the remaining approval types are generally smaller-scale and short in tenure.

<sup>3</sup> Paper 1 – Aggregate Consumption and Demand, State of the Aggregate Resource in Ontario Study, 2010 (MNRF). Based on aggregate production over the last 15 years, per capita consumption is approximately 13 tonnes per year (total decreased to 11 tonnes in 2013).

SAROS concluded that the **Greater Toronto Area<sup>4</sup> (GTA) consumes approximately one-third of the aggregate in Ontario each year (approximately 60 million tonnes) while the Greater Golden Horseshoe<sup>5</sup> (GGH) consumes more than half of Ontario's total (approximately 90 to 100 million tonnes).**

The Growth Plan projects that the GTA will increase in population by 3 million from 2011 to 2041 and by 4.5 million in the GGH. **The GGH will require over 2 billion tonnes of aggregate over the next 25 years** to build and maintain infrastructure within Canada's largest urban area<sup>6</sup>.

A readily available supply of close to market aggregate will be required taking into account this planned growth, the Province's goal of tackling the infrastructure deficit and aggregate consumption levels in the GGH.

In comparison to GTA aggregate consumption, the GTA produced approximately 21.2 million tonnes of aggregate in 2013. This is the total amount of aggregate extracted and shipped from operations within the GTA. For every three tonnes of aggregate consumed in the GTA, only one of those tonnes is produced within the GTA. The majority of resources consumed in the GTA are imported from adjacent areas in the GGH.

Since 2001, the average annual decrease in aggregate production in the GTA is approximately 1.1 million tonnes. A portion of this decrease may be due to reduced demand from the slowing economy but it is also directly impacted by the decreasing amount of licenced supply within the GTA. While the use of recycled aggregate products has been increasing<sup>7</sup>, recycled materials alone cannot replace the substantial reduction in licenced GTA aggregate supply.

Resources within existing licences in the GTA are being rapidly depleted and are not being replaced by resources in new licences. For example, for every three tonnes of aggregate produced in the GTA, approximately one tonne is replaced through new licences in the GTA (**Figure 3**) (similar to the GTA production-consumption ratio). In addition, over 80% of the Class A licences in the GTA predate the Aggregate Resources Act (1990) (**Figure 4**).

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<sup>4</sup> GTA refers to the City of Toronto, and Regions of Durham, York, Peel and Halton.

<sup>5</sup> GGH refers to the GTA and the Region of Niagara, City of Hamilton, Haldimand County, County of Brant, City of Brantford, Region of Waterloo, County of Wellington, City of Guelph, County of Dufferin, County of Simcoe, City of Barrie, City of Orillia, City of Kawartha Lakes, County of Peterborough, City of Peterborough and County of Northumberland.

<sup>6</sup> The City of Toronto is the 4<sup>th</sup> largest city in North America by population.

<sup>7</sup> Estimated that approximately 13 million tonnes of recycled aggregate are consumed annually (Aggregate Recycling of Ontario).

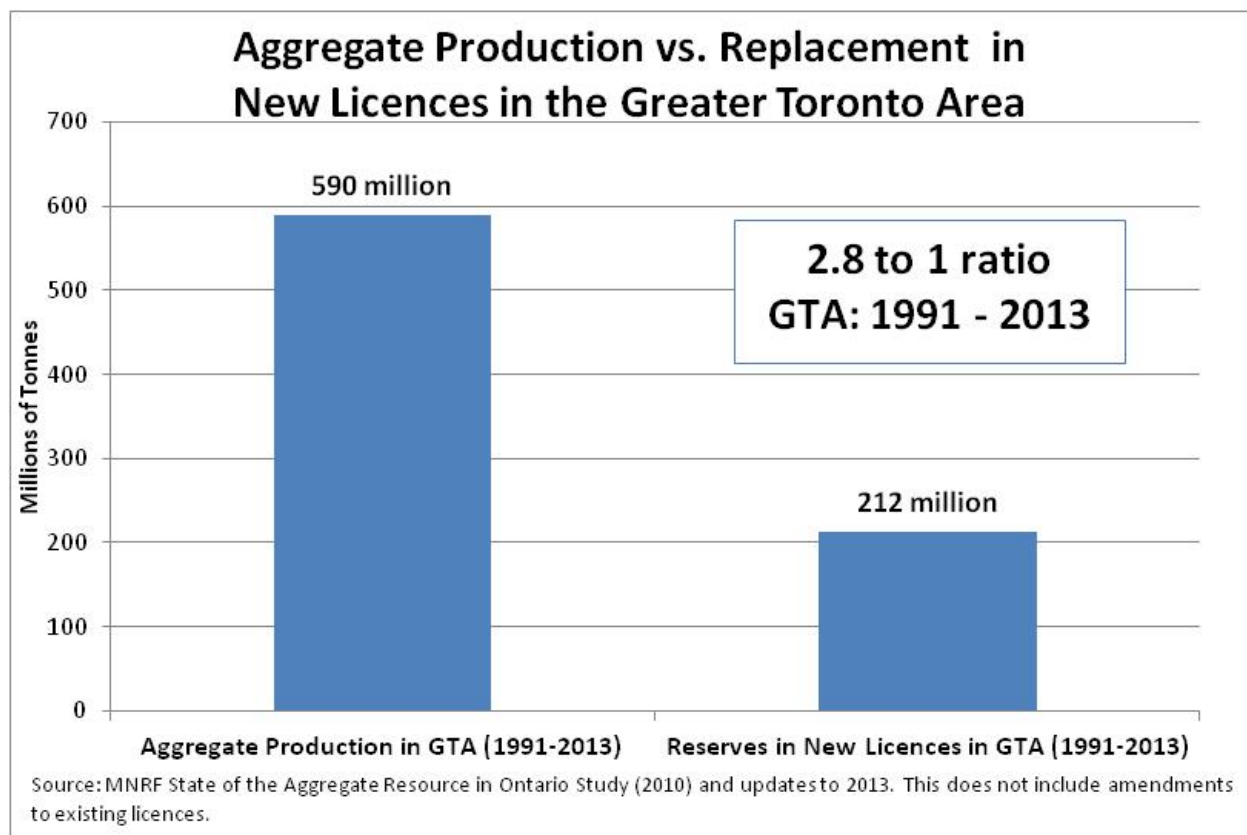


Figure 3 GTA Aggregate Production vs. Replacement in New Licences (1991 to 2013)

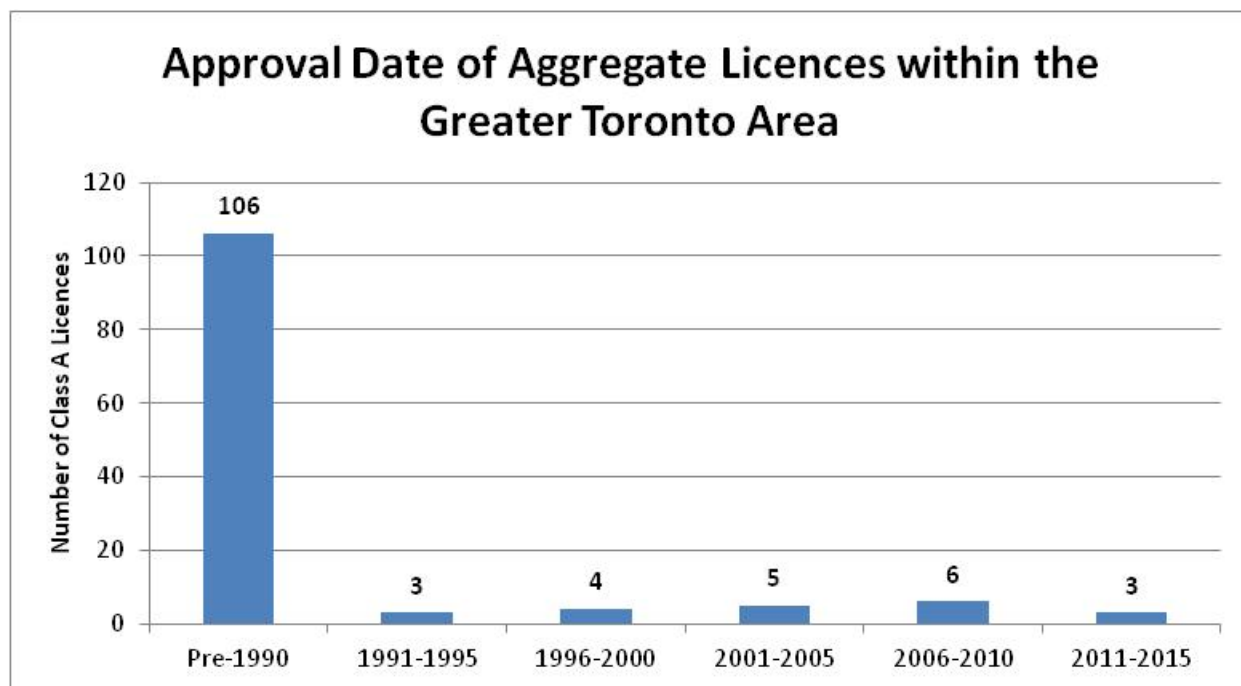


Figure 4 Approval Date of Aggregate Licences within the GTA (Class A Licences)

SAROS examined opportunities to maximize resource use within existing licences<sup>8</sup>. This exercise was undertaken based on the knowledge that licenced supply was diminishing relative to new supply. The paper concluded that maximizing reserves on existing licenced sites is a responsible method for resource management to the extent that the surrounding natural environment and social receptors are not increasingly affected.

Examples of maximizing resource use within existing licences include reducing regulatory setbacks, extracting road allowances where feasible, extracting to greater depths and maximizing importation for rehabilitation to reduce resource sterilization.

## **Provincial Interest in Aggregate Availability**

The conservation and management of the mineral resource base is a matter of provincial interest in accordance with the Planning Act (Section 2). The 2014 Provincial Policy Statement (PPS) states that the wise use and management of mineral resources over the long term is a key provincial interest. These tested principles have been recognized in provincial planning for over 40 years.

The importance of these non-renewable resources to our economy and their critical role in the maintenance and construction of infrastructure is well known<sup>9</sup>.

There is a provincial interest in maintaining a readily available supply of close to market aggregate in order to minimize environmental and social impacts, and transportation costs.

Aggregate resources are required in economically active and growing regions. The GTA and GGH are among the fastest growing regions in North America. Provincial policies provide for the continued growth and development within these urban areas.

Aggregate resources are considered high bulk, lower per unit value resources which places constraints on the distance over which they are transported. Extracting resources close to where they are utilized avoids unnecessarily transferring impacts to other jurisdictions.

The decades-long provincial interest in aggregate outlines the importance of the resource to our economy. Ontario is currently affected by substantial debt (\$284 billion as of March 2015). This debt is impacting the maintenance and renewal of infrastructure. This is not an issue that is specific to the GTA but is currently affecting all parts of Ontario.

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<sup>8</sup> Paper 5 – Aggregate Reserves in Existing Operations, SAROS, 2010 (MNRF)

<sup>9</sup> Standing Committee Report on Aggregate Resources Act Review, October 2013

A readily available supply of close to market aggregate can ensure these resources are economically competitive while minimizing social and environmental impacts in accordance with the PPS. This supply will also contribute to the government's plan to build an integrated transportation network across the Province (Moving Ontario Forward). The plan will make nearly \$31.5 billion available over the next 10 years for investments in priority infrastructure projects across Ontario such as public transit, roads, bridges and highways.<sup>10</sup>

Importing aggregate resources further from market will result in higher aggregate prices. There is only so much money allocated in the budget which could result in fewer infrastructure projects being completed if close to market aggregate is not utilized.

## Location of Aggregate Resources

Aggregate resources are fixed in location and must be extracted where they naturally occur. They cannot be extracted in any location. Several geological variables affect the location of these resources including resource quantity and quality, depth of overburden (topsoil and subsoil) and other factors. Aggregate resources by their very nature, are found in river valleys, outwash plains, escarpments, limestone plains, eskers, kames and moraines. Many of these landforms are less developed for agriculture and therefore contain wetlands, woodlands and water features.

Planning for aggregate cannot assume there will be resources available after everything else is planned for or protected. Rather, an integrated, positive and proactive effort is required to plan for future aggregate availability. SAROS found that **93% of selected bedrock resources (high quality crushed stone) had overlapping constraints such as environmental, agricultural and/or social constraints.**

Without an integrated and balanced approach, it is unlikely that an aggregate deposit could be made available since there is a high probability of on-site and adjacent natural features, agriculture, water resources and social factors to consider

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<sup>10</sup> Two dedicated funds would be established – one for the Greater Toronto and Hamilton Area with about \$16 billion available for investment in transit and one for the rest of Ontario with about \$15 billion available for critical infrastructure projects (2015 Budget).

## Implications of Extracting Resources Further from Market

There would be **significant economic, environmental and social implications of shifting away from the close to market policy in favour of importation from long distance sources to the GTA market** even when considering alternative modes of transportation (e.g. rail, marine, etc.). Similar to locally sourced food, using close to market aggregate resources significantly reduces environmental and economic impacts.

The environmental and social implications of extracting resources further from market are well documented<sup>11</sup>. Previous studies assessing alternative modes of transportation have noted that there is no identifiable environmental benefit of extracting aggregate from a pit and quarry located further from market. Localized and site specific impacts are well regulated and controlled. These impacts are similar independent of site location.

While some believe that moving extraction further from market would address local land use conflicts and reduce social concerns, a host of new incremental impacts and issues emerge when delivering far from market aggregate to a job site. **Figure 5** provides a summary of the impacts as a result of transporting aggregate further from market supply areas (page 13).

When assessing alternatives to the existing close to market policy, it is necessary to look at the entire material flow path from aggregate operation to job site. With close to market, the truck loaded at the pit or quarry can deliver the product directly to the job site. With the alternatives, additional stages of transportation are required to deliver material to the job site. In addition, close to market docks, rail terminals or redistribution terminals are necessary to stockpile aggregate and reload it onto short-haul delivery trucks.

This, in turn, presents a number of social, environmental and economic impacts that will accrue as a result of using alternative transportation modes. Whether aggregate is shipped by truck or rail to a redistribution terminal, this may create its own social impact concerns and local land use conflicts. Unlike close to market, which disperses traffic to a greater extent, alternative options tend to impose significant traffic volumes on fewer routes.

The size and capacity of the redistribution terminals are limited due to the capacity of the road network that must accommodate high volumes of truck traffic. Availability of large parcels of land

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<sup>11</sup> State of the Aggregate Resource in Ontario Study, MNRF (2010); Between Rock and a Hard Place, Canadian Urban Institute (2009); Greenbelt Plan, MMAH (2005).



for these permanent, heavy industrial uses is another limitation. As a result, multiple facilities are required within and near urban areas.

In addition, many related industrial uses that are traditionally located in close to market pits and quarries will also have to be accommodated at redistribution terminals or nearby facilities. These include aggregate recycling and the temporary storage of recycling materials, deposition of clean fill materials, asphalt and concrete plants, as well as parking and staging areas for haulage trucks. These are all heavy industrial uses that require large areas and generate heavy truck traffic.

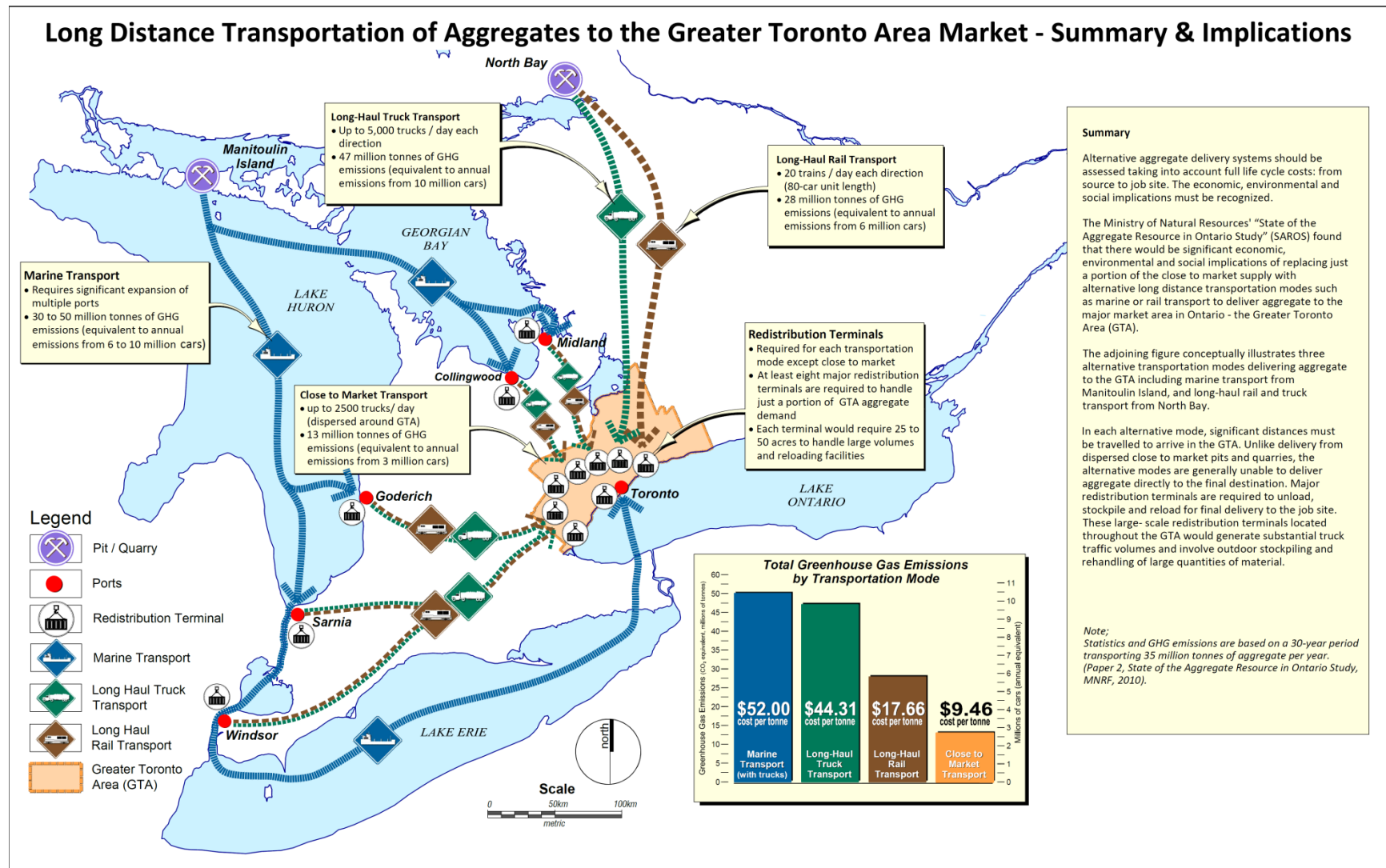


Figure 5 Long Distance Transportation of Aggregates to the GTA Market – Summary & Implications

## Regulation of Aggregate Resources

Over 25 provincial and federal acts apply to the management of aggregate resources. It is a well regulated industry that is subject to stringent environmental and operational regulations.

The Aggregate Resources Act (ARA) and its implementing policies are continually updated to stay current with societal expectations. The ARA Review is currently ongoing and recommendations have been prepared. The government has committed to improving the ARA as outlined in the Premier's 2014 Mandate Letter to the Minister of Natural Resources<sup>12</sup>.

**The need for revisions to the Provincial Plans should be based on implementation experiences with operations approved since each of the Plans came into effect.**

## Provincial Plans

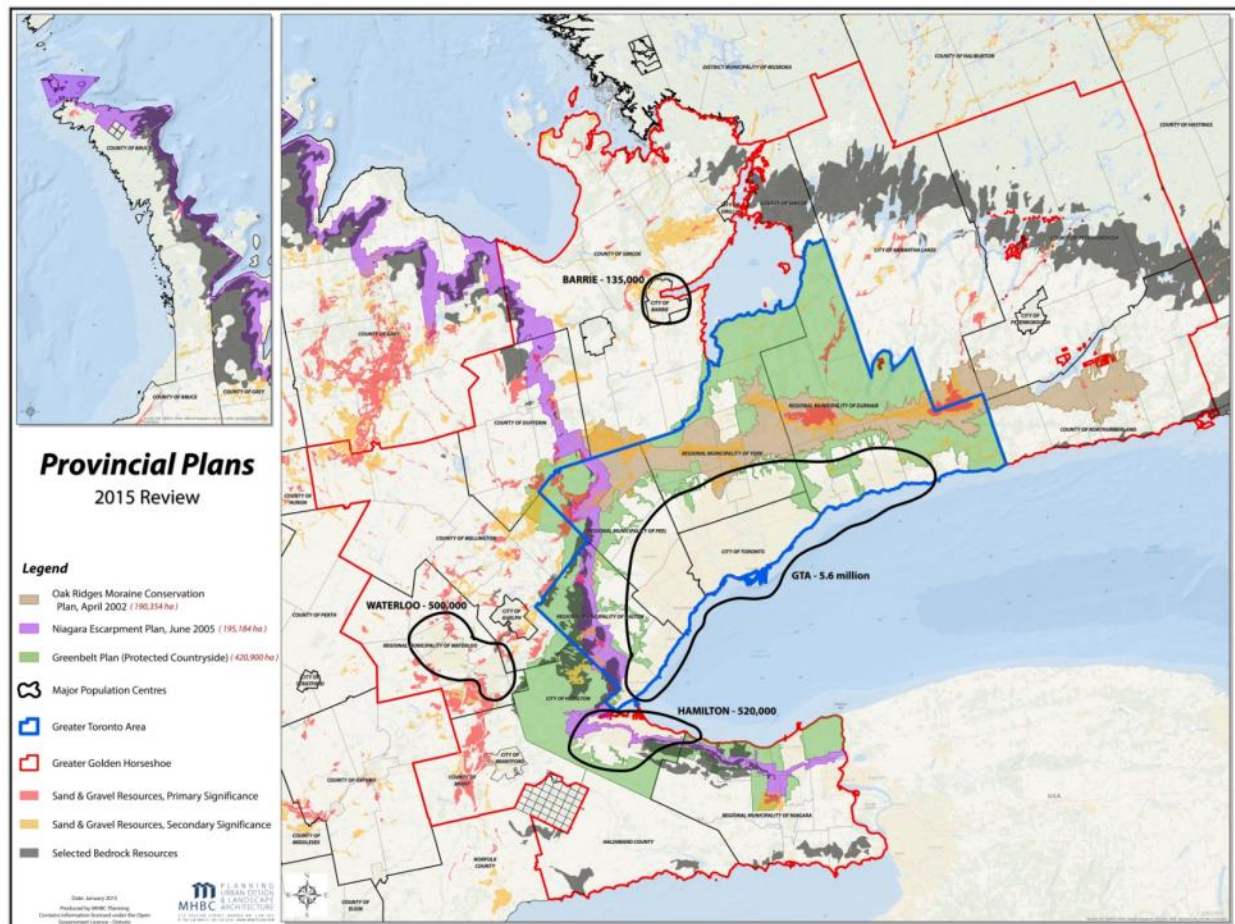
The Province has eight Provincial Plans currently in effect:

- Parkway Belt West Plan (1978)
- Niagara Escarpment Plan (1985, 1994, 2005)
- Oak Ridges Moraine Conservation Plan (2002)
- Greenbelt Plan (2005)
- Growth Plan for the Greater Golden Horseshoe (2006)
- Central Pickering Development Plan (2006)
- Lake Simcoe Protection Plan (2009)
- Growth Plan for Northern Ontario (2011)

All of these Provincial Plans except for the Growth Plan for Northern Ontario are located within some portion of the GTA and the GGH. **The Niagara Escarpment Plan (NEP), Oak Ridges Moraine Conservation Plan (ORMCP) and Greenbelt Plan apply to over 8,000 km<sup>2</sup> of land** in southern Ontario, primarily surrounding the largest urban area in Canada. By comparison, the size of the GTA is approximately 7,125 km<sup>2</sup> (**Figure 6**).

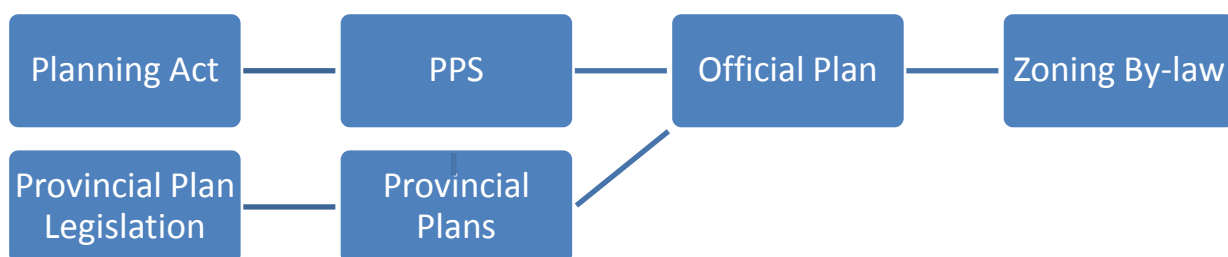
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<sup>12</sup> "Engaging with stakeholders, Aboriginal communities and other concerned ministers to address the recommendations of the Standing Committee on General Government's Report on the Review of the Aggregate Resources Act. You will also bring forward recommended regulatory and legislative changes to improve the Aggregate Resources Act" (Premier's Mandate Letter to Minister of Natural Resources, p. 3).



**Figure 6** Provincial Plan Areas

The authority to develop and implement Provincial Plans comes from specific legislation enacted for each of the Provincial Plans. Conceptually, the planning system in Ontario within Provincial Plan Areas generally contains the hierarchy outlined in **Figure 7** (from left to right):



**Figure 7** Conceptual Planning System in Ontario

All planning decisions in Ontario shall conform with the Provincial Plans that are in effect on that date, or shall not conflict with them, as the case may be. Provincial Plans shall be read in conjunction with the PPS and take precedence over its policies to the extent of any conflict, except where legislation establishing Provincial Plans provides otherwise.

The conflict provisions in each of the Provincial Plans and the PPS create a complex policy environment notably within the GGH.

The ORMCP and the Greenbelt Plan prohibit municipal official plans from adopting more restrictive aggregate resource policies than the policies contained in each of those Plans. This policy is not contained in the NEP or PPS.

## Aggregate Production in Provincial Plan Areas

The NEP, ORMCP and Greenbelt Plan contain very high quality sources of close to market aggregate required by the GGH including sand and gravel, and bedrock resources.

In 2013, **aggregate production from the three Provincial Plans was approximately 28.4 million tonnes** or approximately 20% of Ontario's total aggregate production (despite covering only 0.7% of Ontario's land area). A large portion of the GGH's total aggregate production originates from the Provincial Plans and almost all of the GTA's production comes from the Provincial Plan Areas<sup>13</sup>. In addition, **eight of the top 10 aggregate producing municipalities are located within at least one of these Provincial Plans**<sup>14</sup>.

SAROS concluded that the GGH consumes more than half of Ontario's total aggregate production (approximately 90 to 100 million tonnes per year). In 2013, **the Provincial Plan Areas supplied approximately 35% of the GGH's total aggregate needs.**

While the Provincial Plan Areas contribute a significant amount of production, **only 1.5% of these Plan Areas are licenced for aggregate extraction.** Of the 1.5% that is licenced for extraction, only 37% of this area is disturbed while the remaining area is rehabilitated or not yet extracted (**0.6% of the Provincial Plan Areas are subject to active aggregate extraction**).

**Since 1990, over 3,000 ha (100+ licences) have been surrendered and returned to other uses within the Plan Areas.** The after uses of these sites include natural heritage areas, publicly accessible greenspace, agricultural land and other land uses.

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<sup>13</sup> In 2013, the GGH produced approximately 68.8 million tonnes and the GTA produced approximately 21.2 million tonnes of aggregate.

<sup>14</sup> The City of Ottawa and Township of Zorra are the only two municipalities not located within one of the Provincial Plan Areas.

Since approval of the Provincial Plans, only 0.1% of the Plan Areas has been licenced for aggregate operations (22 licences in total).

**The public and provincial interest in close to market supply can only be achieved if Provincial Plans contain reasonable policies to make aggregate available.**

## Quality of Aggregate Resources in Provincial Plan Areas

**The NEP, ORMCP and Greenbelt Plan contain very high quality sources of close to market aggregate required by the GGH including sand and gravel, and bedrock resources.** The Growth Plan for the GGH requires higher density development and infrastructure needs that can only be produced from high quality aggregate resources such as those found within the Plan Areas.

The NEP Area contains what is considered to be Ontario's highest quality limestone resources (Amabel Formation). It is suitable for the production of a wide range of construction projects including crushed stone, concrete aggregate and building stone.

The ORMCP contains significant sand and gravel resources that are considered to be essential to provincial, regional and municipal public infrastructure, construction and maintenance programs.

The Greenbelt Plan due to its overall size contains both significant sand and gravel as well as bedrock resources (e.g. Amabel Formation, Sunderland Esker, Caledon Outwash, Fonthill Kame, etc.).

The resources within these Plan Areas are the closest to market resources for Ontario's major growth area. In terms of aggregate quality, **the resources within the Provincial Plan Areas are among the highest quality resources available within the GGH** (both bedrock, and sand & gravel). This is recognized in Provincial Aggregate Resources Inventory Papers:

- *"The brow and upper surface of the Niagara Escarpment is formed by the tough, erosion-resistant unsubdivided Amabel Formation...that is well suited for the production of road-building and construction aggregate. It has also been used in high performance concrete and extracted for building and landscape stone elsewhere in the province. The unsubdivided Amabel Formation is considered to be an aggregate resource of provincial significance for these products"* (Aggregate Resources Inventory for the County of Simcoe, ARIP 188, 2013).



- *"Since the Amabel Formation produces excellent crushed stone, and this area is located within a provincial region of high demand, this area should be considered for resource protection"* (Aggregate Resources Inventory of the Region of Halton, ARIP 164, 1996).
- *"The Oak Ridges moraine represents the largest and most important aggregate resource area in the region"* (Aggregate Resources Inventory of the Region of Durham, ARIP 185, 2010).
- *"The best quality and most extensive sand and gravel deposits are in the southern part of the county, particularly in the Oak Ridges Moraine"* (Aggregate Resources Inventory of Victoria County, ARIP 168, 2000).
- *"Sand and gravel was deposited in this channel and formed the Caledon Outwash deposit (Cowan 1976). This deposit contains large resources of sand and gravel and is a major aggregate source in central Ontario"* (Aggregate Resources Inventory of the Region of Peel, ARIP 165, 2009).
- *"Mineral aggregates provide essential building materials for growth. According to the Ministry of Natural Resources (MNR) aggregate mapping and its 1992 State of the Resource Report, there are significant aggregate resource deposits in the Golden Horseshoe region that directly supply the housing and manufacturing industries"* (Greenbelt Task Force Discussion Paper, 2004).

SAROS concluded the use of higher quality crushed stone in road construction is increasing, particularly in urban settings where high volumes and heavy loads are encountered<sup>15</sup>. This trend is expected to continue for both ongoing maintenance and new construction. The increase in higher-density development will also necessitate large volumes of high quality aggregate. The close to market resources from these Provincial Plans will be able to accommodate these needs for high quality aggregate.

**High quality aggregate resources are needed to build higher density developments and the infrastructure required by the Growth Plan.**

## **Growth Plan for the Greater Golden Horseshoe**

The Growth Plan for the GGH is the Government's vision for building stronger, prosperous communities by better managing growth in this region. The Growth Plan recognizes that decades of neglect and lack of sufficient investment have resulted in the current infrastructure deficit and

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<sup>15</sup> Paper 1 – Aggregate Consumption and Demand, State of the Aggregate Resource in Ontario Study, 2010 (MNRF).

that tens of billions of dollars beyond current levels of investment will be required to bring it back into balance.

The guiding principles of the Growth Plan are the following:

- Build compact, vibrant and complete communities.
- Plan and manage growth to support a strong and competitive economy.
- Protect, conserve, enhance and wisely use the valuable natural resources of land, air and water for current and future generations.
- Optimize the use of existing and new infrastructure to support growth in a compact, efficient form.
- Provide for different approaches to managing growth that recognize the diversity of communities in the GGH.
- Promote collaboration among all sectors – government, private and non-profit – and residents to achieve the vision.

The Growth Plan states that a balanced approach to the wise use and management of all resources, including natural heritage, agriculture and mineral aggregates, will be implemented. The ongoing availability of these resources is essential for sustainability of all communities.

Ensuring a readily available supply of close to market aggregate resources is consistent with the objectives and guiding principles of the Growth Plan. This can only be achieved if a balanced approach to resource management is utilized by securing new licenced supply while minimizing environmental and social impacts.

## **Balancing Other Resources**

### **1. Agriculture**

Provincial policy regarding agricultural and aggregate uses has a long history as evidenced through the evolution of provincial policies and guidelines from the 1978 Food Land Guidelines to the 2014 PPS.

Over the past 30 years policy has consistently acknowledged that both agricultural and aggregate resources are important to the Province. The conflict between resources is often resolved by extracting the aggregate and rehabilitating the site back to agricultural land which has been consistently recognized in provincial policy.



However, where agricultural rehabilitation is not possible, compromises are required and over the years the policy has evolved to deal with this situation. Since 1995, provincial policy has allowed below water table extraction on prime agricultural land to be considered without the requirement for complete agricultural rehabilitation subject to meeting specific tests. This policy approach is retained in the 2014 PPS.

During the Standing Committee hearings on the ARA Review, concerns were expressed regarding the loss of prime agricultural lands as a result of aggregate extraction. The data revealed that **of the approximately 4.9 million ha of prime agricultural land in southern Ontario, only 35,000 ha contain an aggregate licence (0.7% of prime agricultural land)**. This would not reflect the amount of prime agricultural land lost as a large portion of these licences would be rehabilitated back to prime agricultural land in accordance with provincial policy.

Between 2010 and 2014, the Ontario Stone, Sand & Gravel Association (OSSGA) assessed over 700 former pits and quarries across southern Ontario<sup>16</sup>. Post-rehabilitation, agriculture was found to be the second highest land use just after natural land uses (vegetated terrestrial or aquatic ecosystems). Former aggregate operations are being rehabilitated to agricultural land uses.

## 2. Water

One of the purposes of the ARA is to minimize adverse impact on the environment in respect of aggregate operations. When considering whether a licence should be issued or refused, the Minister of Natural Resources & Forestry shall have regard to any possible effects on ground and surface water resources. The PPS and Provincial Plans also contain policies protecting water resources and ensuring that impacts on ground and surface water resources are minimized to acceptable levels.

While impacts to water resources are required to be minimized during the operation of pits and quarries, the after-use of these operations can contribute to creating resilient communities in the face of a changing climate. Rehabilitated pits and quarries provide opportunities for water storage and diverse wetland habitats which can address water quantity issues and minimize flooding in flood-prone areas, respectively. These are examples of the interim nature of extraction and accommodating subsequent land uses based on local needs.

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<sup>16</sup> Study of Aggregate Site Rehabilitation in Ontario, OSSGA, 2014

## Summary

The NEP, ORMCP and Greenbelt Plan contain very high quality sources of close to market aggregate required by the GGH. All three of the Provincial Plan Areas are located within and adjacent to Ontario's economic and population centre. The Growth Plan for the GGH requires higher density development and infrastructure needs that can only be produced from high quality aggregate resources such as those found within the Plan Areas.

The GGH has a major infrastructure deficit. The Province is investing more than \$130 billion in public infrastructure over the next 10 years including \$31.5 billion in dedicated funds available for public transit, transportation and other priority infrastructure projects under Moving Ontario Forward<sup>17</sup>. In the GGH, over 2 billion tonnes of aggregate will be needed over the next 25 years to build and maintain required infrastructure.

The public and provincial interest in close to market supply can only be achieved if Provincial Plans contain reasonable policies to make aggregate available and not include arbitrary restrictions or prohibitions. A readily available supply of close to market aggregate can ensure these resources are economically competitive while minimizing social and environmental impacts in accordance with the PPS.

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<sup>17</sup> 2015 Ontario Budget.

## **Plan Review Requirements**

The Provincial Plans contain specific review provisions for considering revisions and amendments. Recent changes to Provincial Plan legislation now require that the Greenbelt Plan be reviewed in conjunction with the reviews of the NEP and ORMCP.

The Greenbelt Plan is to be reviewed every 10 years after the date the Plan comes into force to determine whether it should be revised. According to the Greenbelt Plan, *"the purpose of the review is to assess the effectiveness of the policies contained in the Plan (using information gathered through the monitoring program, and conducted through a public process), and make amendments, if appropriate, to update or include new information or improve the effectiveness and relevance of the policies"* (Section 5.6). The review is to ensure the Plan does not remain static and does not become irrelevant over time.

The review of the ORMCP must determine whether any revisions should be made to the Plan. The review cannot consider removing land from the Natural Core Areas or the Natural Linkage Areas. According to the ORMCP, the review shall consider the following:

- the need to change or refine the boundaries of the Countryside Areas and Settlement Areas;
- the continued effectiveness and relevance of the Plan's vision, purpose, objectives and policies;
- the effectiveness of the Plan's policies in meeting the Plan's vision, purpose and objectives;
- new, updated, or corrected information;
- new science, technologies, or practices that shall improve the Plan's effectiveness;
- any other matter that the Ontario government deems appropriate.

The ORMCP also states that the review may include an examination of the Plan's policies on extraction in Natural Core Areas *"recognizing that mineral aggregates are a non-renewable resource that are particularly desirable this close to markets"* (Implementation, p. 11). In particular, the review may consider changing the policies to consider whether new aggregate operations may be permitted in Natural Core Areas where the ecological integrity of those Areas can be maintained or improved.

The NEPDA requires that the Minister consult with affected ministries, the Niagara Escarpment Commission, interested public bodies, applicable municipalities and advisory committees, and

ensure that the public is given an opportunity to participate in the review. After completion of the review, the Minister may propose amendments to the NEP. Amendments to the NEP resulting from a review shall be consistent with and promote the objectives of the NEP.

For each Provincial Plan, the Minister(s) has the discretion to decide whether the Plan should be amended based on this Plan Review.

## **Niagara Escarpment Plan**

### **Overview**

The Niagara Escarpment includes a variety of topographic features and land uses extending 725 km from Queenston in Niagara Region to Tobermory in Bruce County.

The Niagara Escarpment Planning and Development Act (NEPDA) was enacted in 1973 in response to studies assessing the impacts of development on the escarpment. The Act provided for the establishment of the Niagara Escarpment Commission (NEC) and the preparation of a Niagara Escarpment Plan (NEP).

After extensive consultation efforts, months of hearings and recommendation reports, Cabinet approved the NEP in 1985. The Plan provides for the maintenance of the Niagara Escarpment and land in its vicinity substantially as a continuous natural environment, and to ensure only such development occurs as is compatible with that natural environment. The NEP serves as a framework of objectives and policies to strike a balance between development, preservation and the enjoyment of this important resource.

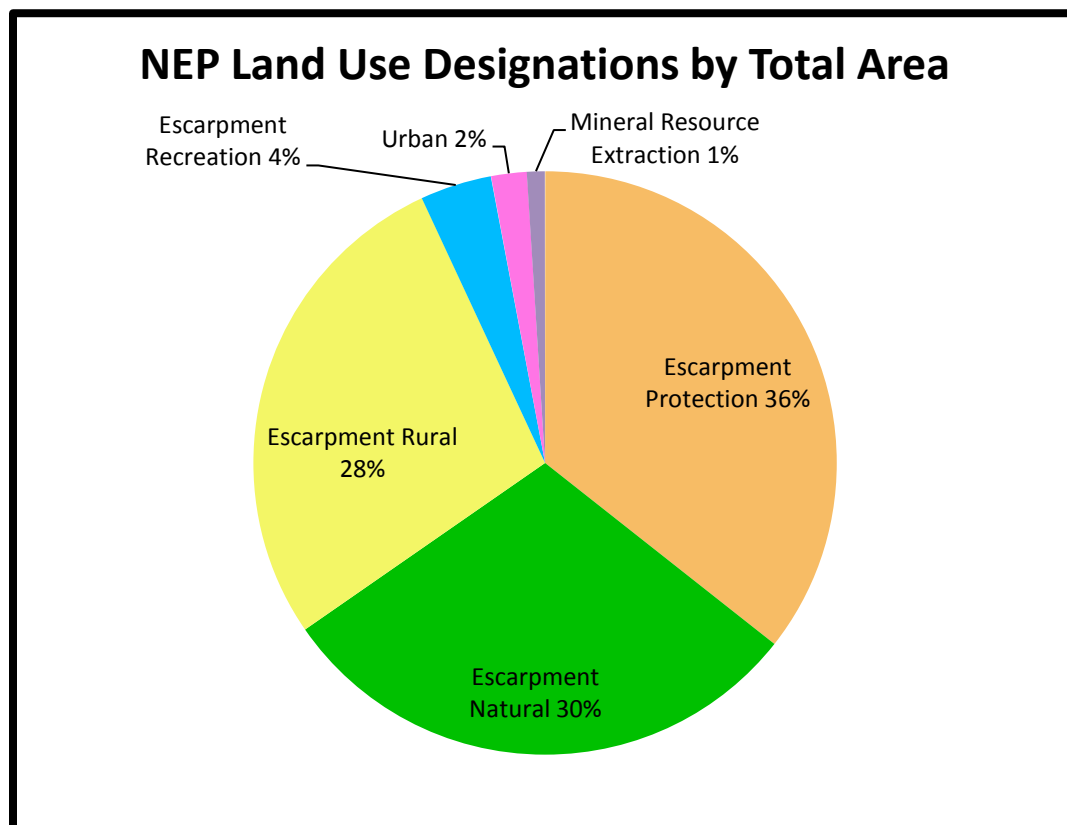
The objectives of the Plan are:

1. To protect unique ecologic and historic areas;
2. To maintain and enhance the quality and character of natural streams and water supplies;
3. To provide adequate opportunities for outdoor recreation;
4. To maintain and enhance the open landscape character of the Niagara Escarpment in so far as possible, by such means as compatible farming or forestry and by preserving the natural scenery;
5. To ensure that all new development is compatible with the purpose of the Plan;
6. To provide for adequate public access to the Niagara Escarpment; and
7. To support municipalities within the Niagara Escarpment Plan Area in their exercise of the planning functions conferred upon them by the Planning Act.

Planning decisions within the NEP Area must conform to the Plan. Where there is a conflict between any provision of the NEP and any provision of an Official Plan, Zoning By-law or the PPS, then the provision of the NEP prevails. This authority is established through the NEPDA.

The NEP Area is approximately 195,184 ha in size. Eight upper/single-tier municipalities and 22 lower-tier municipalities are located within the NEP Area. There are seven land use designations within the Plan Area (**Figure 8**):

- Escarpment Protection Area (69,397 ha – 36%)
- Escarpment Natural Area (58,289 ha – 30%)
- Escarpment Rural Area (53,719 ha – 28%)
- Escarpment Recreation Area (7,280 ha – 4%)
- Urban Area (3,972 ha – 2%)
- Minor Urban Centre (Overlay) (2,877 ha – 1%)
- Mineral Resource Extraction Area (2,520 ha – 1%)



**Figure 8** NEP Land Use Designations by Total Area (may not add up to 100% due to rounding)

The Escarpment Protection Area and Escarpment Natural Area correspond with the escarpment and represent environmental designations where the most significant natural features are located. Limited uses are permitted in these designations.

The Escarpment Rural Area is the remnant area that provides a buffer to the more ecologically sensitive areas of the escarpment. Objective #5 of the Escarpment Rural Area is *"to provide for the designation of new Mineral Resource Extraction Areas which can be accommodated by an amendment to the Niagara Escarpment Plan"*. Permitted use #21 in the Escarpment Rural Area is *"new licensed pits or quarries producing more than 20,000 tonnes (22,000 tons) annually subject to Part 1.9 (requiring an amendment to the Niagara Escarpment Plan), and Part 2.11"*. These policies have been included in the NEP since Cabinet approval of the Plan in 1985 and have been subject to subsequent Plan reviews.

The inclusion of an objective in the Escarpment Rural Area designation is an expression of the importance of providing for new Mineral Resource Extraction Areas within the NEP area, where appropriate<sup>18</sup>.

New aggregate extraction is only permitted in the NEP by amendment to the Escarpment Rural Area designation<sup>19</sup>. Aggregate extraction is not permitted in the Escarpment Protection Area and Escarpment Natural Area designations. These two designations are approximately 127,686 ha in size which represents 66% of the NEP.

## Aggregate Resources and Licences within the NEP

Approximately 39,106 ha of the Escarpment Natural Area and Escarpment Protection Area designations contain significant aggregate resources<sup>20</sup>. This represents a substantial area with known resources that is not available for extraction because consideration of extraction is not permitted in these designations. In total, **approximately 63% of the significant aggregate resources located in the NEP Area are not available for extraction**<sup>21</sup>.

By comparison, approximately 24,349 ha of the Escarpment Rural Area contain significant aggregate resources<sup>22</sup>. This represents approximately 12.5% of the total NEP Area. The majority of this area is located within the northern portion of the NEP in Grey and Bruce Counties (15,133 ha or 62% of the Escarpment Rural Area resources). Bruce and Grey are the only upper-tier municipalities in the NEP that are not located within the GGH.

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<sup>18</sup> Walker Duntroon Quarry Decision (OCH Case No. 08-094, June 18, 2012, p. 10)

<sup>19</sup> Class B licences producing less than 20,000 tonnes annually are permitted in the Escarpment Rural Area.

<sup>20</sup> Significant refers to ARIP primary and secondary sand & gravel resources, and selected bedrock resource areas.

<sup>21</sup> Also considers the resources located within Escarpment Recreation Area and Urban Area designations.

<sup>22</sup> This represents the total area of significant aggregate resources and does not account for environmental, social or planning constraints that may further impact resource availability.

The Mineral Resource Extraction Area designation includes licenced pits and quarries. **Approximately 1% of the NEP Area is designated Mineral Resource Extraction Area.** The Mineral Resource Extraction Area is the smallest of the seven NEP land use designations in terms of land area. For context, the Escarpment Recreation Area designation is almost three times as large.

In 1995, there were approximately 45 Class A licences located within the NEP Area<sup>23</sup>. This number has decreased to 38 as of 2014.

Since the approval of the NEP in 1985, 12 applications for new or expansion aggregate operations have been approved in the NEP Area<sup>24</sup> (five pits and seven quarries). Approval was upheld for several of these applications after being petitioned to Cabinet. Twelve licences amounts to one approval every two-and-a-half years. The total licenced area of these approved operations is 552 ha which represents 0.3% of the NEP Area. There is currently one active application in the NEP Area (Dufferin Acton Quarry Extension).

During this same time, the amount of former aggregate operations that have been rehabilitated and redesignated from Mineral Resource Extraction Areas to other designations has been significant. **Since 1985, almost 1,000 ha of land from 24 former pits and quarries have been redesignated to other designations.** The majority of the sites are now designated Escarpment Natural Area or Escarpment Protection Area (e.g. Milton Limestone Quarry, Lafarge Mono Mills Pit, Dufferin Milton Quarry, etc.).

OSSGA has been researching aggregate rehabilitation across Ontario including within the NEP Area (Study of Aggregate Site Rehabilitation in Ontario, 2010-2013). OSSGA found that almost half of the studied former extraction sites within the NEP Area were rehabilitated to natural uses (48%) followed by open space (13%) and water uses/features (12%). Forty-six percent (46%) of the sites are now located within the Escarpment Protection Area.

In 2012, the NEC released a "Self Study Report" as part of the 10-year review of the escarpment's Biosphere Reserve designation. Under the section "*Describe the main conservation programs that have been conducted in the biosphere reserve during the past ten years as well as current on-going ones*", the report highlighted the Lafarge Mono Mills Pit, the J.C. Duff Pit and the Dufferin Milton Quarry as redesignating land to the "core area" (Escarpment Natural Area). The report noted that

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<sup>23</sup> Mineral Resources Planning Study, Niagara Escarpment Plan Area and Surrounding Areas, 1995

<sup>24</sup> Total accounts for applications that were subject to the Niagara Escarpment Plan, and not grandfathered or exempted applications.



*"licensed aggregate operations within the NEBR [Niagara Escarpment Biosphere Reserve] have a limited life span" (p. 28).*

The benefits of rehabilitated pits and quarries have been identified in several recent Plan Amendment reports. The NEC has recognized that extracted lands can be returned to uses and natural states that are compatible with the escarpment environment. The NEC has applied high value scenic ratings to former aggregate operations.

Since 1985, the amount of land redesignated from former aggregate operations has doubled the amount of newly licenced land within the NEP. This is a clear demonstration that aggregate extraction is an interim use that can accommodate subsequent uses. Planning for aggregate availability must recognize this important component by including rehabilitation opportunities as a factor in the consideration of new licence applications.

Along with the significant amount of land redesignated as a result of rehabilitated pits and quarries, the Escarpment Natural Area and Escarpment Protection Area have increased in size as a result of additions to the NEP Area:

Comparison of NEP Land Use Designations	1991*	2014
<b>Total NEP Area</b>	183,000 ha	195,184 ha (+7%)
<b>Escarpment Natural Area</b>	48,367 ha	58,289 ha (+21%)
<b>Escarpment Protection Area</b>	67,463 ha	69,397 ha (+3%)
<b>Escarpment Rural Area</b>	53,701 ha	53,719 ha (0%)
<b>Mineral Resource Extraction Area</b>	3,100 ha	2,520 ha (-19%)

\*Land areas based on Aggregate Producers' Association of Ontario (APAO) Submission to NEC, May 1991

**The amount of land designated for extraction in the NEP Area has decreased 580 ha since 1991** (annual average decrease of 40 ha per year). At the same time, the amount of land designated Escarpment Natural and Protection has increased 11,856 ha. The majority of these lands were added to the NEP Area in the last 20 years. If these added lands contained significant aggregate resources, they can no longer be considered for extraction.

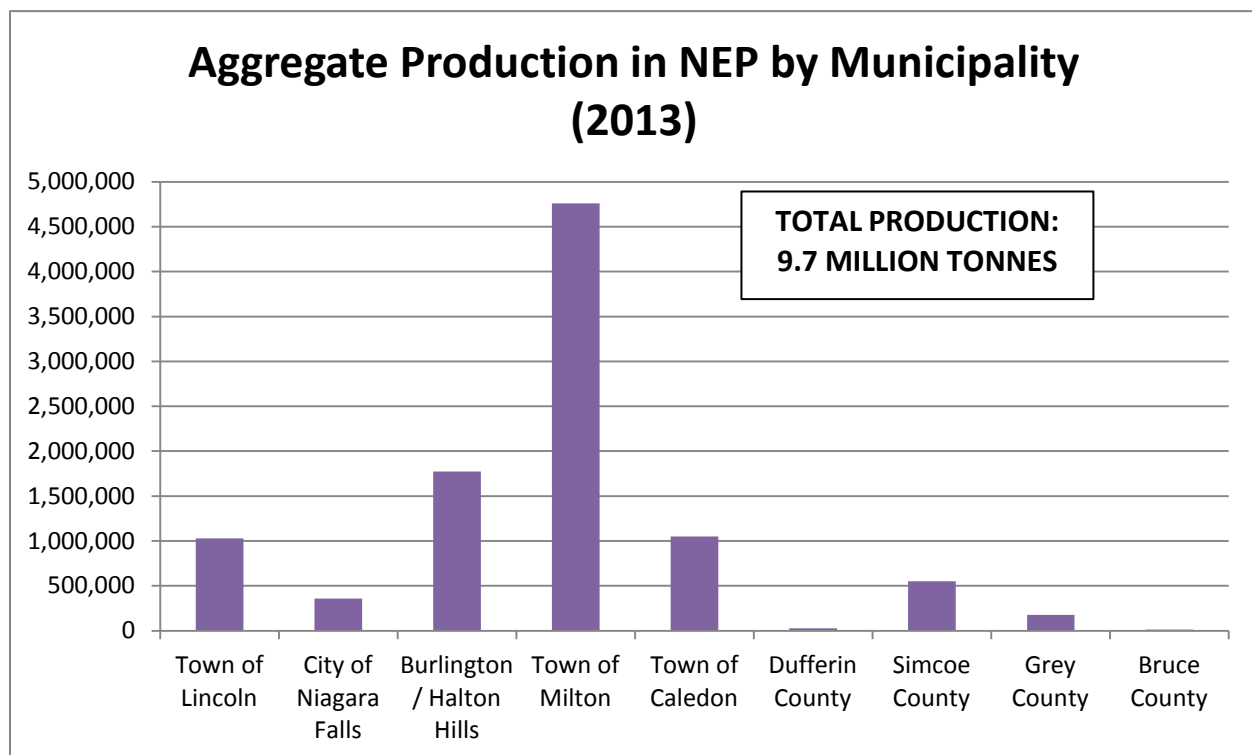
## Niagara Escarpment and Close to Market Supply

The Niagara Escarpment is an important source of both bedrock, and sand and gravel resources. The escarpment contains high-quality aggregate resources including dolostone and shale

resources. Resources such as those extracted from the Amabel Formation (located from Hamilton to the Bruce Peninsula) are capable of producing strong and durable construction materials including concrete stone, asphalt stone, granulars, drainage stone, screenings and landscape stone.

It is estimated that **approximately 9.7 million tonnes of aggregate were produced from the NEP Area in 2013**. This equates to approximately 7% of Ontario's total aggregate production. For context, the NEP would be the highest producing municipality in Ontario in 2013<sup>25</sup>.

The majority of the 9.7 million tonnes is produced within the GTA and almost all of the production comes from the GGH (**Figure 9**).



**Figure 9** Aggregate Production in NEP by Municipality (2013)

**In 2013, approximately 12% of the GGH's total aggregate consumption was supplied from the NEP.**

<sup>25</sup> By municipality, the City of Ottawa produced the most aggregate resources in Ontario in 2013 with 9.6 million tonnes. The City of Ottawa is over 80,000 ha larger in size than the NEP Area.

## Implementation Experience

The NEP has a longer history compared to the other Provincial Plans including more thorough and comprehensive policy reviews. There has been more study, public hearings, public consultation, involvement of Provincial ministries and implementation experience. As a result, it is a well established principle that the NEP objective of allowing consideration of aggregate extraction in the Escarpment Rural Area is in accordance with the purpose and objectives of the NEPDA.

The approved NEP policies represent a balanced approach to the management of aggregate resources. Continued availability of aggregate resources from the NEP Area has been an important component throughout the evolution and review of the Plan. The approved policies evolved out of extensive periods of consultation, debate, hearings, studies, and Cabinet deliberations which have allowed for all sides of the issues to be examined several times over a 45-year period.

The balance that has been secured protects the Escarpment Natural Area and Escarpment Protection Area (71% of the Plan Area is protected from extraction<sup>26</sup>). The objectives of the Escarpment Rural Area allow for consideration of extraction subject to strict environmental criteria and considerations contained in the NEP as well as municipal official plans, the PPS and Aggregate Resources Act. Only a small portion of the NEP Area has potential to supply aggregate resources (12.5%)<sup>27</sup>.

The principles of the NEP and its policies, including consideration of controlled extraction, are consistent with the UNESCO Biosphere Reserve designation. Biosphere Reserves typically include transition areas where sustainable development, resource management and human activity are encouraged. In the NEP, the transition areas are the Escarpment Rural Areas and designations that permit resource use and recreation.

The original Plan for the Niagara Escarpment was developed over a 15-year period (1969-1985). The determination of an outer boundary for the Plan Area and the internal designations were developed in stages over this period. It is important to appreciate that the escarpment feature, significant related landforms and important environmental features are contained and protected within the Escarpment Natural Area and Escarpment Protection Area. The Escarpment Rural Area

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<sup>26</sup> Includes the Escarpment Natural Area, Escarpment Protection Area, Escarpment Recreation Area and Urban Area.

<sup>27</sup> This total does not account for environmental, social or planning constraints that may further impact resource availability.

is within the somewhat arbitrary and politically-based outer boundary of the Plan that is not designated Escarpment Protection Area or Escarpment Natural Area. There are no inherent physical characteristics of the Escarpment Rural Area that differentiate it from many rural areas outside the Plan. This history is easily forgotten and it should not be assumed that inclusion of land inside the NEP Area necessarily implies significant environmental value.

An examination of whether the characteristics of the Escarpment Rural Area warrant a greater degree of protection was further examined in the 1995 “Mineral Resource Planning Study of the Niagara Escarpment Plan Area and Surrounding Areas” (Bird and Hale). The study was prepared following the first Plan review. It concluded that the Escarpment Rural Area contains some constraints that preclude aggregate extraction but other areas have no constraints precluding aggregate extraction. Site-specific investigations, as required by current policy and other legislation, should determine site suitability and acceptability of a proposal.

The fundamental NEP principle of allowing consideration of extraction inside the Escarpment Rural Area was comprehensively re-examined through the first Plan review (1990-1995). The NEC proposed to remove this principle from the Plan and prohibit future aggregate extraction. These proposals were opposed by provincial ministries led by the MNR. The hearing on the proposed changes involved extensive evidence consuming at least three months of hearing time. The Hearing Officers resoundingly rejected the NEC’s proposed prohibition and found the NEC approach to aggregate extraction was “fundamentally misguided” (p. 227)<sup>28</sup>. There was no evidence provided to suggest that pits and quarries approved under the Plan were having unanticipated or unacceptable environmental effects. The Hearing Officers cautioned the policy makers from relying too heavily on NEC evidence which was often found to be less than objective.

Despite the Hearing Officers’ findings, the NEC continued to promote the prohibition on new extraction but this was also rejected by Cabinet when the updated Plan was approved.

The principle of aggregate extraction in the Escarpment Rural Area has been central to a 25-year debate regarding the requirement that applicants for Plan Amendments justify need for their proposals taking into account availability of aggregate resources outside the NEP Area. The NEC’s requirement to justify need for aggregate applications has been characterized as a “de facto prohibition”<sup>29</sup>. Suffice to say, this requirement would override the objectives of the Escarpment Rural Area which allow for consideration of new aggregate extraction through the amendment

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<sup>28</sup> Niagara Escarpment Plan Review Hearing, Report of the Hearing Officers, 1993.

<sup>29</sup> Ambro Joint Board Decision CH-02-05, 1996

process. The NEC's approach was tested in the 1990-1995 Plan Review and rejected. It has also been rejected through several decisions on site-specific applications thereby confirming the appropriateness of the policies that provide for consideration of aggregate availability from within the Plan Area.

Making resources available from a close to market location within the NEP has been determined to be sound and prudent public policy. Notwithstanding, there remains philosophical and special interest pressure to prohibit extraction from the entire Plan Area. **Any proposal to reverse or significantly alter the balance that has been achieved would have to be justified on implementation experience that definitively demonstrated that the current policies were not working and there would be substantial environmental harm incurred by continuing with the current policy regime.**

In fact, implementation experience demonstrates that the current policies are functioning as intended. In the Harold Sutherland Keppel Quarry application (which the NEC supported), the NEC explicitly recognized that the NEP provides the opportunity for consideration of aggregate extraction and that the test for aggregate applications is not that there be no impacts<sup>30</sup>:

*"Many of the comments received opposing the application comment that a quarry should not be located in the NEP area or they mention the natural heritage features of the site or the area characteristics which the objector believes should preclude the development of a quarry in this location. With regard to the location of the quarry in the NEP area and within the Biosphere Reserve – the policies of the NEP do not preclude a quarry "if it can be accommodated" by an Amendment.*

*...*

*All aggregate operations have impacts. It is not possible to establish a quarry without a degree of change and disturbance. However, the NEP provides the opportunity for the consideration of aggregate extraction in the Escarpment Rural Area. The test under the NEP is not that there be no impact but whether or not after all factors are assessed, the extraction proposed is likely to negatively affect the Escarpment environment" (p. 17-18).*

## Current Issues

### Consistency with Provincial Legislation and Current Practices

**The policies in the NEP are the oldest of the three Provincial Plans and therefore most in need of fine-tuning and updating to be more consistent with current terminology and**

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<sup>30</sup> NEP Amendment PG 167 07, Addendum Staff Report, August 18, 2011

**practice, and applicable legislation.** The approach to managing, defining and delineating environmental features has evolved. While some aspects of the NEP are unique to the escarpment landscape and purpose and objectives of the NEPDA, many others are more generic and deal with what are now known to be common elements of natural heritage planning.

Many of the discrepancies between terminology and approaches in the NEP relative to the PPS and more contemporary Provincial Plans are a result of historical legacy and not justifiable differences based on need for different approaches.

For example, the PPS, recent Provincial Plans and current Provincial legislation provide consistent definitions, delineation and strong protection for features such as significant wetlands, significant woodlands, species at risk habitat, prime agricultural areas and wellhead protection areas. There is no rationale for treating these features differently in the NEP Area.

**The NEP should protect existing aggregate operations and their ability to expand in accordance with the PPS.** Existing Class A operations are established and designated uses in the NEP.

### **Treatment of Species at Risk Habitat**

Section 2.8.1 of the NEP states that *"new development will not be permitted in identified habitat of endangered (regulated) plant or animal species"*. However, the Endangered Species Act (ESA), which is administered by the MNRF, permits development within species at risk habitat subject to specific conditions and approvals. The NEC is not the approval authority under the ESA and is not responsible for delineating species at risk habitat yet development is prohibited in the NEP. There is no rationale for applying different development policies to species at risk habitat within the NEP. Regardless if habitat is located within or outside the NEP, it is protected and managed in accordance with the ESA.

The NEC is attempting to expand their role in regulating species at risk habitat by proposing a Plan Amendment to prohibit development in endangered and threatened species habitat<sup>31</sup>. The purpose of the proposed amendment according to the NEC is to align with the ESA. However, the proposed policy revisions reflect a different story.

**The NEP should recognize the regulated process under the ESA and revise the applicable policies consistent with the recent changes to the PPS (Section 2.1.7).**

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<sup>31</sup> NEC-initiated Niagara Escarpment Plan Amendment PC 201 13 (Proposed)

## Municipal Official Plan Implementation

Municipal official plans also address lands within the NEP Area. This can create a complex policy structure that leads to unpredictable results and timely delays. In situations with two-tier municipalities, there can be up to three land use designations applicable to a single property<sup>32</sup>. While official plans must conform to the NEP, there can be unique interpretations from each policy document as evidenced through specific applications.

This issue was highlighted in the Joint Board's decision to approve the Walker Duntroon Quarry<sup>33</sup>:

*"The Joint Board notes in this case that there is a plethora of planning policy regimes in place (the County and Township Official Plans, the NEP, the PPS, The Green Belt Plan) purporting some planning policy jurisdiction over the NEP Area. While, this maybe bureaucratically satisfying it does nothing to assist in a clear understanding of the importance of the NEP. Perhaps the goals and objectives of the NEP would be better served if in the local planning policy documents they merely referenced and deferred to the policy directions of the NEP. The attempts to mimic the NEP in local planning documents are confusing and provide little added planning value to the general public. **The resultant conflicting planning policy interpretations as demonstrated at this Hearing can provide little comfort or planning certainty to anyone.***

*The Joint Board during the course of this Hearing heard conflicting opinion evidence from six well qualified professional planners regarding the interpretations to be applied to the various provincial and local planning documents having some policy jurisdiction over the subject proposal. The differences in the local planning documents due to subtle word variations and interpretations proffered by the planning experts are in many ways counterproductive to good planning. One must wonder how individuals could ever find their way correctly through this planning policy morass when six well qualified professional planners with many years of experience found so many areas of disagreement with respect to the meaning of these local planning policy documents. When well qualified professional planners testify that some of the applicable planning policies are befuddling and not clear, there is room for improvement. **Good planning policy should be clear and concise so that citizen, approval authorities, and planning professionals can clearly understand their purpose and meaning. The minor contradictions found in the multiple planning policy documents in no small part have contributed to this very lengthy Hearing***

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<sup>32</sup> Examples in the GGH include the City of Burlington, Town of Milton, Town of Halton Hills and Township of Clearview.

<sup>33</sup> OCH Case No. 08-094, June 18, 2012

*and offer little guidance to the overriding planning policies found in the NEP and the PPS”*  
(p. 18-19).

In order to avoid such confusion and unnecessary complexity, **the PPS should be used as the standard for those features and areas that are not unique to the escarpment landscape.** As an example, **the policies related to the protection and use of natural heritage, agriculture, water and aggregate resources should be consistent with the PPS within the Escarpment Rural Area designation.**

### **Policies, Designation Criteria and Mapping of the Escarpment Rural Area**

**The policies of the Escarpment Rural Area should continue to have an objective to provide for new licenced supply while minimizing environmental and social impacts.** The Escarpment Rural Area policies could be improved by providing for a higher standard of rehabilitation to provide long-term public benefits. Through the Biosphere Reserve reporting, the NEC has recognized the benefits of former aggregate operations contributing to the escarpment landscape. This should be carried forward in the Escarpment Rural Area policies.

Since aggregate extraction is prohibited in the Escarpment Natural Area and Escarpment Protection Area, redesignation of the Escarpment Rural Area to these designations will negatively impact aggregate availability on the escarpment. The new designation criteria proposed by the NEC through the NEP Review Discussion Papers would result in a significant reduction of the Escarpment Rural Area and increases to the Escarpment Natural Area and Escarpment Protection Area. These two designations should reflect the unique features and landscapes of the escarpment and not “standard” features such as municipal natural heritage systems, linkages or corridors.

**If mapping or designation criteria changes are contemplated to the land use designations in the NEP, the impact on aggregate availability must be considered and assessed in recognition of the significance of the resource, close to market supply and relatively limited existing Escarpment Rural Areas.** To maintain a balanced approach, significant expansions of the Escarpment Natural Area or Escarpment Protection Area should be accompanied by policy changes to allow for consideration of new aggregate extraction subject to protection of the actual escarpment feature and other natural features and agricultural areas in accordance with the PPS.



## Application Processing Times

From an administrative perspective, the processing time for aggregate applications is unreasonable. Since the 1990s, the average processing time for new or expansion aggregate applications in the NEP is approximately 7.5 years<sup>34</sup>. This likely exceeds the average processing time for aggregate applications in Ontario and other Provincial Plan Areas. Efficiencies and streamlining should be recognized in the application process. **The timelines for processing applications should be prescribed consistent with the Planning Act.**

## Regulating Aggregate Operations

**There is unnecessary overlap and duplication in the current system of regulating aggregate operations in the NEP.** Section 24 of the NEPDA requires a development permit for all development within the development control area. The NEC has discretion over the permit conditions. The difficulty is permits are usually issued requiring compliance with the ARA site plans. This directly duplicates the requirements of the ARA so that two provincial agencies are doing the same thing. The ARA is specifically designed to regulate aggregate operations. The NEC development permit control system is not. The MNRF has expertise and detailed policies and procedures to specifically deal with pits and quarries while the NEC does not.

This circumstance creates confusion and delays where revisions to permits, licences or site plans are required. Two approval authorities and duplicative processes are required where one would suffice. Enforcement is less effective where lead responsibilities are unclear. This is an unwise use of government resources (the NEC has acknowledged that matters related to extraction of a pit or quarry is more directly regulated by the MNRF and MOE<sup>35</sup>).

Rationalizing the regulatory function would be a small but important step towards implementing recommendations of the 2012 Commission on the Reform of Ontario's Public Services (Drummond Report). The Commission's report recommended that the agencies involved in land use planning and resource management should be rationalized and consolidated. In particular, it was recommended that a single agency could be created to deliver natural resource management activities in central southern Ontario including the NEC.

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<sup>34</sup> From commencement of ARA application to licence issuance (includes approved and refused applications).

<sup>35</sup> Harold Sutherland Keppel Quarry, Plan Amendment 167

Eliminating this inefficiency would be accomplished by new NEP policy acknowledging the ARA regulatory function and administrative changes to the standard conditions that are included on NEC development permits for aggregate operations. A development permit would still be required but, once issued, day to day regulation would be under the sole jurisdiction of the MNRF under the ARA.

## **Visual Impacts**

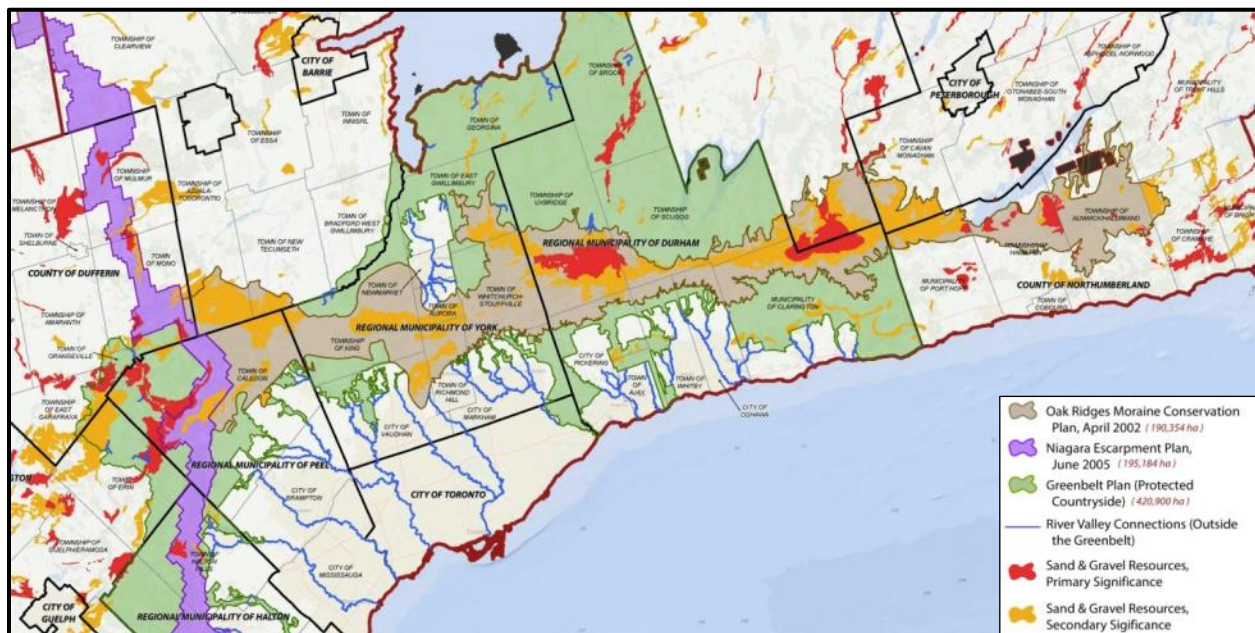
The NEP contains specific policies with respect to visual impacts and maintaining the open landscape character of the escarpment. The NEP objective of providing for aggregate extraction in the Escarpment Rural Area should be incorporated by NEC in the review and decision-making of visual impact studies for aggregate applications. It should be noted that former aggregate extraction sites have been identified as some of the highest quality areas in terms of visual attractiveness.

**The policies should take into consideration mitigation measures that minimize visual impacts for aggregate operations (e.g. berms, screenings, etc.) and recognize that the final rehabilitation although a different landform can contribute to the open landscape character of the NEP.**

## Oak Ridges Moraine Conservation Plan

### Overview

The Oak Ridges Moraine is a geological landform in south central Ontario stretching from the Niagara Escarpment in Caledon in the west to Northumberland County in the east (Rice Lake). The moraine is located north of the built-up area of the GTA (65% of the moraine is located in the GTA and the entire moraine is located within the GGH) (**Figure 10**).



**Figure 10** The Oak Ridges Moraine.

The Oak Ridges Moraine is a major source of sand & gravel resources for the GTA. The resources of the moraine are considered to be essential to provincial, regional and municipal public infrastructure, construction and maintenance programs. According to the Oak Ridges Moraine Conservation Plan (ORMCP), the moraine has a unique concentration of environmental, geological and hydrological features including *"sand and gravel resources close to market"* (Introduction, p. 2).

### Planning on the Oak Ridges Moraine

The 1990s was an intensive period of activity for planning on the Oak Ridges Moraine. In 1991, the government formed a technical committee to create a long-term development strategy for the moraine. The strategy would provide the basis for a regional approach to planning. As part of the

strategy, a background study was prepared on the state of aggregate resources on the moraine<sup>36</sup>. The study provided the following conclusions which are still relevant today:

- Aggregate extraction has co-existed with other land uses on the Oak Ridges Moraine for over 100 years while supplying essential aggregate products for the GTA and local growth (economic development) (2-20).
- The current Ontario legislative and regulatory framework provides for comprehensive assessment and mitigation of environmental impacts related to aggregate extraction (4-30).
- Any planning initiatives for the Oak Ridges Moraine must recognize the provincial significance of the sand and gravel resource in the moraine and their importance to the Greater Toronto Area and adjacent market areas (6-1).

The overall planning strategy was completed in 1994.

In the late 1990s, several residential development proposals on the moraine brought significant attention to its management and protection. In response to these pressures, the government introduced the Oak Ridges Moraine Protection Act which came into effect in May 2001 and established a six-month moratorium for development on the moraine in order for the government to conduct consultation on how to protect the moraine.

Following the passage of this Act, the government established an Advisory Panel to provide recommendations on a plan for the future of the moraine. In consultation with public and stakeholder consultation, the Advisory Panel and government provided final recommendations which formed the basis of the ORMCP.

The Oak Ridges Moraine Conservation Act was approved in December 2001 which established the authority for the Minister of Municipal Affairs and Housing to prepare an ORMCP for all or part of the moraine.

The ORMCP was finalized in April 2002 and was deemed to have come into force on November 16, 2001. The purpose of the Plan is to provide land use and resource management planning direction to provincial ministers, ministries, agencies, municipalities, municipal planning authorities, landowners and other stakeholders on how to protect the moraine's ecological and hydrological features and functions.

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<sup>36</sup> Oak Ridges Moraine Planning Background Study 10 (Aggregate Resources Study), 1994

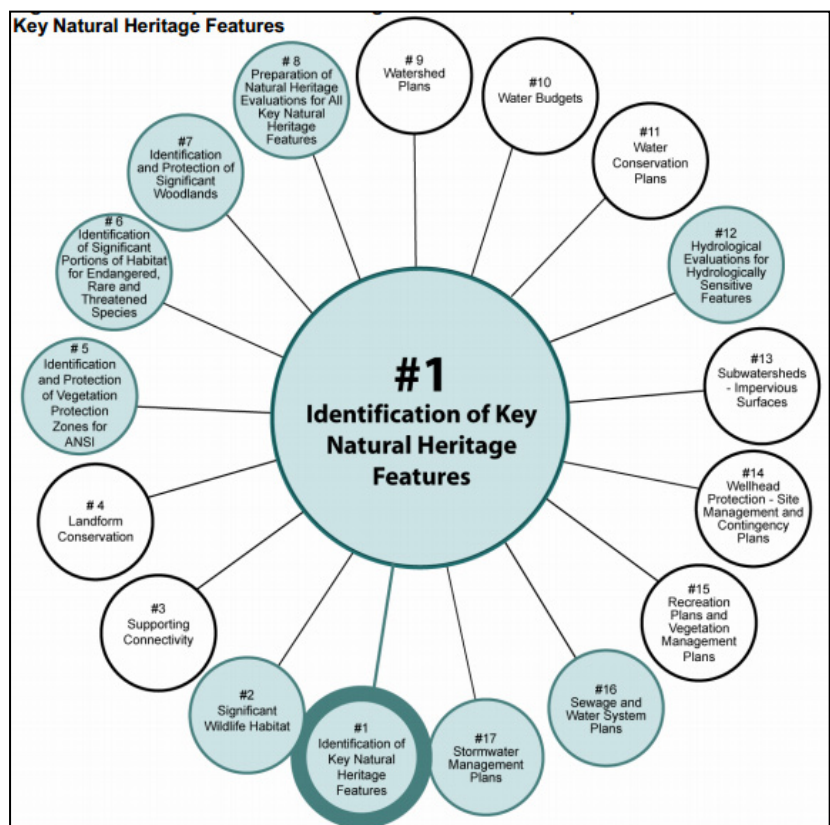
Prior to the ORMCP, planning for the moraine recognized the correlation between the geological landform and the close to market aggregate resource.

One of the drivers for the development of a Provincial Plan on the moraine was protection of its hydrogeological function (described as southern Ontario's rain barrel). It is well established that there is no negative impact on the hydrologic or hydrogeological functions of the moraine as a result of aggregate extraction. The science has not changed and recent Source Water Protection planning has confirmed that extraction is not a threat to water supplies.

Unlike the NEP, the ORMCP does not have a specific agency to implement and manage its policies. The ORMCP is implemented through municipal official plans. Planning decisions are required to conform with the ORMCP and municipalities were required to bring their official plans into conformity with the Plan within three years of it coming into effect.

In conjunction with the ORMCP, the Province developed a series of technical papers to assist in the implementation of the policies and application of some of the technical requirements. The papers represent the Province's approach to implementing the ORMCP policies (**Figure 11**).

The Province noted that the technical papers were prepared based on the best science and information available at the time of preparation and may be amended from time to time to incorporate new information and improved approaches as they become available.



**Figure 11** Topics for ORMCP Technical Paper Series

## Land Use Designations and Policies

The legislation and ORMCP recognize the importance of sand & gravel resources on the moraine. Municipalities cannot adopt policies that are more restrictive than the policies of the ORMCP with respect to aggregate resources (Section 33 of ORMCP).

The Oak Ridges Moraine Conservation Act states that the objectives of the Plan are:

- a) protecting the ecological and hydrological integrity of the Oak Ridges Moraine Area;
- b) ensuring that only land and resource uses that maintain, improve or restore the ecological and hydrological functions of the Oak Ridges Moraine Area are permitted;
- c) maintaining, improving or restoring all the elements that contribute to the ecological and hydrological functions of the Oak Ridges Moraine Area, including the quality and quantity of its water and its other resources;
- d) ensuring that the Oak Ridges Moraine Area is maintained as a continuous natural landform and environment for the benefit of present and future generations;
- e) providing for land and resource uses and development that are compatible with the other objectives of the Plan;
- f) providing for continued development within existing urban settlement areas and recognizing existing rural settlements;
- g) providing for a continuous recreational trail through the Oak Ridges Moraine Area that is accessible to all including persons with disabilities; and
- h) providing for other public recreational access to the Oak Ridges Moraine Area; and,
- i) any other prescribed objectives.

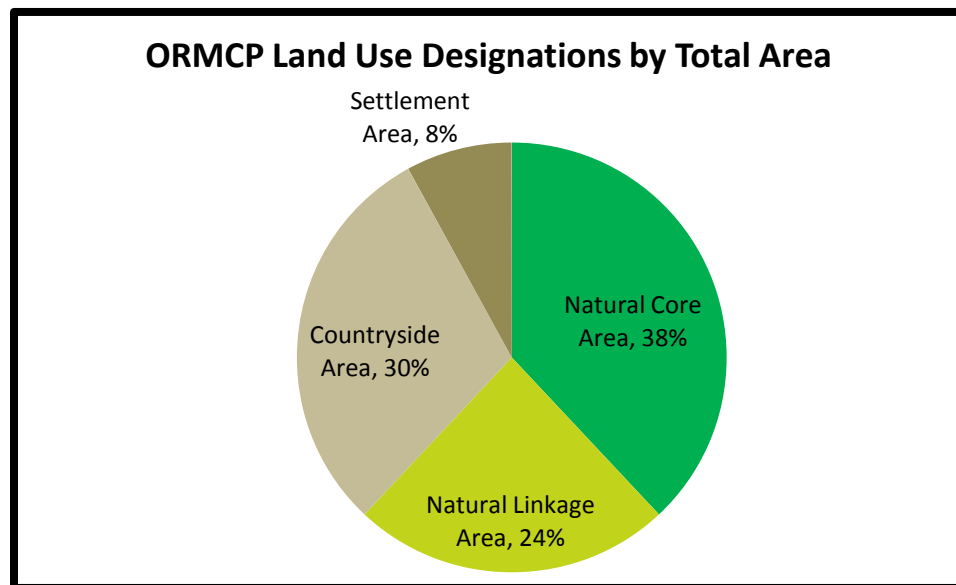
Objectives b) and e) provide for resource uses that maintain, improve or restore the ecological and hydrological functions of the moraine and resource uses that are compatible with the other objectives of the Plan. Retaining balanced policies for aggregate resource management is required to meet the objectives of the Plan and legislation.

The ORMCP Area is approximately 190,354 ha in size. The moraine crosses 32 municipalities in three regions (Peel, York and Durham), four counties (Dufferin, Simcoe, Peterborough and Northumberland), and the City of Kawartha Lakes.



There are four land use designations within the Plan Area (**Figure 12**):

- Natural Core Area (71,877 ha – 38%)
- Natural Linkage Area (46,038 ha – 24%)
- Countryside Area (56,212 ha – 30%)
- Settlement Area (15,840 ha – 8%)



**Figure 12** ORMCP Land Use Designations by Total Area

Natural Core Areas protect those lands with the greatest concentrations of key natural heritage features which are critical to maintaining the integrity of the moraine as a whole. Permitted uses are limited. New aggregate operations are not permitted.

Natural Linkage Areas protect critical natural and open space linkages between the Core Areas and along rivers and streams. Only those operations extracting above the water table are permitted in the Linkage Area.

Countryside Areas provide an agricultural and rural transition and buffer between the Core and Linkage Areas and the urbanized Settlement Areas. Most agricultural and rural uses are permitted in this designation including aggregate extraction (above or below water).

New aggregate extraction is only permitted in the ORMCP in the Natural Linkage Areas and Countryside Areas. **Aggregate extraction is prohibited in approximately 46% of the Plan Area and below water extraction is prohibited in approximately 70% of the Plan Area.**

## Aggregate Resources and Licences within the ORMCP

Over 50% of the total significant sand & gravel resources are not available for extraction in the ORMCP<sup>37</sup>. The Natural Core Area contains the most significant sand & gravel resources by land area compared to the other designations in the ORMCP. The Countryside Area designation, which permits above or below extraction, contains approximately 14,795 ha or 24% of significant sand & gravel resources.

Not including lands that are currently licenced for a Class A pit within significant resource areas, there are approximately 25,470 ha of resources available for extraction in the ORMCP<sup>38</sup> (41% of the total significant resources in the ORMCP). This represents the total area of significant aggregate resources and does not account for environmental, social or planning constraints that may further impact resource availability.

**Approximately 16% of the ORMCP Area contains significant sand & gravel resources where extraction may be permitted** (Countryside Area and Natural Linkage Area).

The majority of primary sand & gravel resources are located within the Township of Uxbridge, City of Kawartha Lakes and Municipality of Clarington (approximately 78% of the 13,430 ha of primary sand & gravel resources in the ORMCP). A significant portion of these areas are currently licenced for extraction or have been rehabilitated with the licence surrendered.

These resources of primary significance are some of the closest to market sand & gravel resources available to the GTA market. To underline the importance of these areas, four of the top 10 aggregate producing municipalities in 2013 are located within the ORMCP (Clarington, Kawartha Lakes, Uxbridge and Caledon). Almost all of the resources extracted from Uxbridge originate from the ORMCP while the majority of sand & gravel resources extracted from Kawartha Lakes and Clarington originate from the ORMCP. A limited amount of resources are extracted from the ORMCP in Caledon.

There are currently 107 licences in the ORMCP Area with a total licenced area of 5,040 ha (approximately 2.6% of the ORMCP Area). A significant portion of these licences were "grandfathered" under the former Pits and Quarries Control Act in the early 1970s.

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<sup>37</sup> Significant refers to ARIP primary and secondary resources.

<sup>38</sup> May include minor double-counting if licences are located within Natural Core Area designation.



If licenced aggregate operations were a designation in the ORMCP, it would be the smallest in terms of land area. The majority of the licenced pit area is a result of existing pits that were included in the ORMCP Area when the Plan came into effect in 2002 (97% of total licenced area).

Since the approval of the ORMCP in 2002, seven applications for new or expansion pits have been approved in the ORMCP (four of the seven applications were appealed to the OMB)<sup>39</sup>. The total licenced area of these approved operations is approximately 174 ha which represents less than 0.1% of the ORMCP Area. The total reserves from the seven operations are approximately 35 million tonnes. In other words, **an average of less than 3 million tonnes has been licenced in the ORMCP each year since 2002.**

There are currently five active pit applications within the ORMCP Area. The total licenced area of the proposed pits is 149 ha (0.1% of the ORMCP Area) with estimated reserves of more than 25 million tonnes. This is a substantial amount of sand & gravel resources that would be available in a close to market location.

Since 1990, 38 licences have been surrendered under the Aggregate Resources Act in the ORMCP Area (1,174 ha). **Rehabilitation and the surrender of aggregate licences are exceeding the issuance of new licences in the ORMCP.**

Based on OSSGA's recent rehabilitation research, more than half of the studied sites within the ORMCP Area were rehabilitated to natural uses (52%) followed by open space (14%) and recreational uses (9%). Thirty-eight percent (38%) of the sites are now located within the Natural Linkage Area or Natural Core Area.

## **Oak Ridges Moraine and Close to Market Supply**

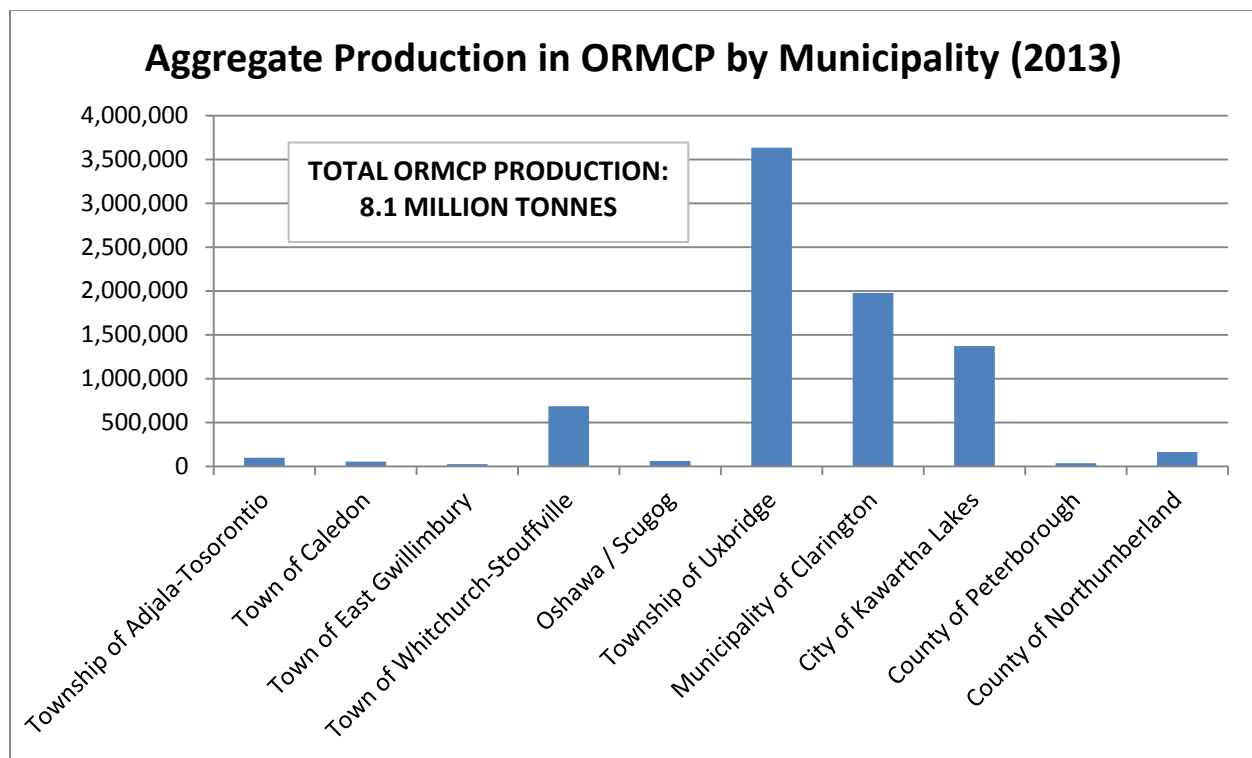
The Oak Ridges Moraine is an important source of sand and gravel resources. It is estimated that **approximately 8.1 million tonnes of aggregate were produced from the ORMCP Area in 2013.** This equates to approximately 6% of Ontario's total aggregate production. For context, the ORMCP would be the second highest producing municipality in Ontario in 2013 behind only the City of Ottawa (9.6 million tonnes)<sup>40</sup>.

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<sup>39</sup> Total accounts for applications that were subject to the Oak Ridges Moraine Conservation Plan, and not grandfathered or exempted applications.

<sup>40</sup> The City of Ottawa is almost 90,000 ha larger in size than the ORMCP Area.

The majority of the 8.1 million tonnes is produced within the GTA. More than 95% of the ORMCP's production comes from the GTA and the City of Kawartha Lakes (Manvers Township) (**Figure 13**).



**Figure 13** Aggregate Production in ORMCP by Municipality (2013)

**In 2013, approximately 10% of the GGH's total aggregate consumption was supplied from the ORMCP.**

Aggregate production in the ORMCP is exceeding replacement through new licenced supply. Based on the ORMCP producing approximately 6% of Ontario's aggregate production and reserves from the seven new licences issued since 2002, the ratio of ORMCP production to replacement is approximately 3.4 to 1.

## Current Issues

A key issue in the development of the ORMCP in the 1990s and early 2000s was the appropriateness of restrictions on aggregate availability. Specifically, prohibiting new aggregate extraction in Natural Core Areas and limiting extraction to above the water table in Natural Linkage Areas.

## Prohibiting New Extraction within Natural Core Areas

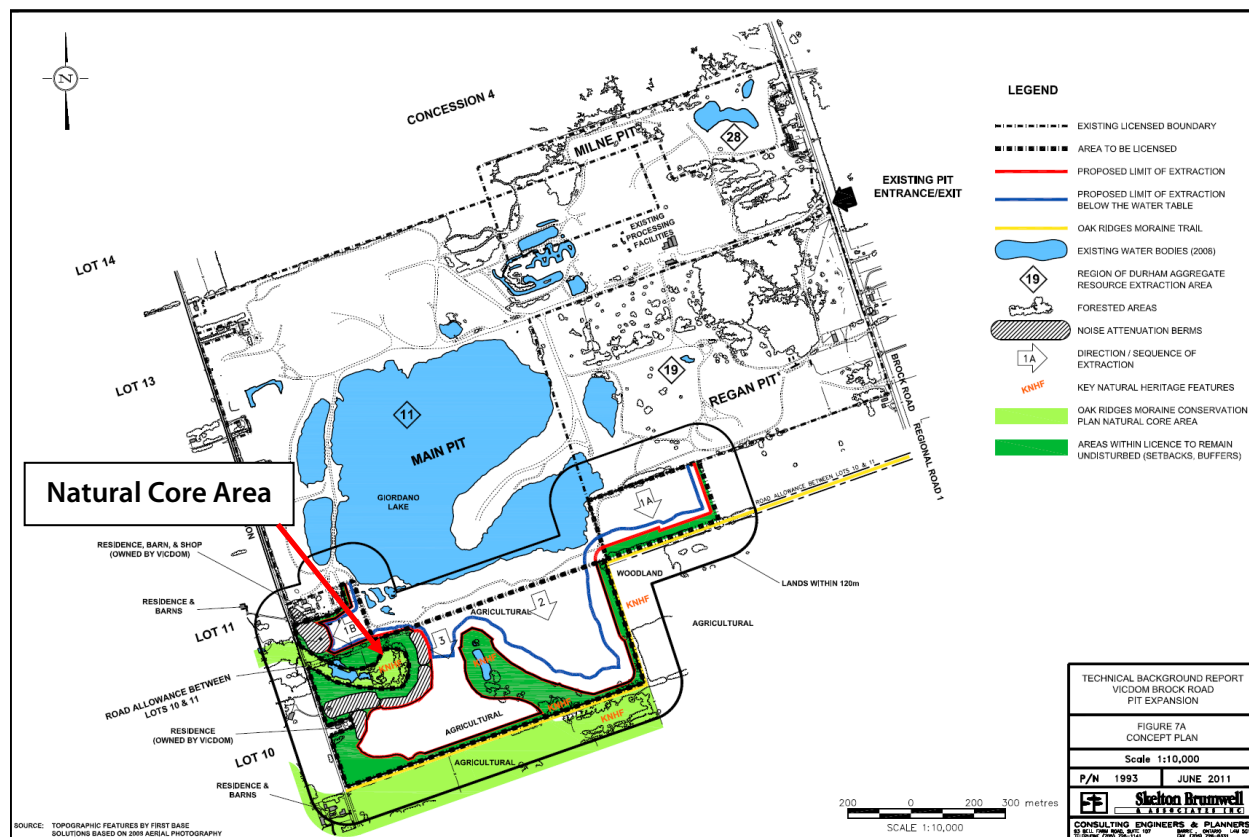
While the Natural Core Areas are described in the ORMCP as concentrations of significant features and functions which are critical to maintaining the integrity of the moraine, the designation includes both significant features as well as less significant wooded and wetland areas and, of more concern, open agricultural landscapes, pastured lands and early successional vegetation.

**Figure 14** identifies an area within the Township of Uxbridge that is designated Natural Core Area. While these lands are located adjacent to a conservation area, the large open fields and agricultural lands do not contain key natural heritage features. The open area contains primary and secondary sand & gravel resources that are not available for extraction due to the Natural Core Area designation.



**Figure 14** Natural Core Area designation within the Township of Uxbridge

A specific example of unnecessarily prohibiting access to significant aggregate resources involves an application in the Township of Uxbridge by Vicdom Sand & Gravel. **Figure 15** identifies the Natural Core Area that extends onto the pit expansion property. This area is not considered a high quality natural feature however due to the designation, extraction is prohibited. Even though a relatively small area of Natural Core Area is located on the property, the extent and location of the designation leads to the sterilization of a significant amount of sand & gravel resources on a property that is primarily designated Countryside Area.



**Figure 15** Natural Core Area designation on Vicdom pit expansion property (Source: Skelton Brumwell & Associates).

This is an example of why **liberally delineating a prohibitive land use designation can have major impacts on close to market resource availability.**

Prohibiting new extraction in the Natural Core Area was one of the more contentious issues when the ORMCP was proposed. Recognizing the environmental consequences of limiting significant close to market aggregate supply, the implementation provisions of the ORMCP specify that the 10-year review may include an examination of the policies on prohibiting extraction in Natural Core Area.

**The ORMCP review should include an examination of the policies on extraction in Natural Core Areas.**

### Limiting Extraction to Above Water in Natural Linkage Areas

The other significant concern was limiting extraction to above the water table only in Natural Linkage Areas. No hydrogeological basis has been established for this restriction. The net effects

of below water table extraction on the water balance are normally minor and localized<sup>41</sup>. There should not be arbitrary restrictions on the amount of aggregate that can be removed from sites that could be licenced in the Natural Linkage Area.

These restrictions represent a significant reduction in the amount of aggregate that can be considered for extraction and result in materials being extracted further from market sources which has well established economic, social and environmental consequences.

### **Natural Corridor Width**

For aggregate applications, the ORMCP requires that an excluded area be at least 1.25 km wide in the Natural Linkage Area in order to maintain connectivity. Through the development of the ORMCP and technical papers, OSSGA consistently raised issues with the interpretation of this policy as further prohibiting extraction on the moraine. This policy has been interpreted to require a continuous 1.25 km corridor in the Natural Linkage Area which will sterilize locations where extraction may meet all of the other objectives of the Plan. In addition, sites which are located adjacent to the Natural Core Area and do not have 1.25 km of Natural Linkage Area may be precluded regardless of the fact that a natural corridor would exist within the Natural Core Area. The implementation of this policy has been an issue.

**The overall goals and objectives of the ORMCP must be considered when applying the 1.25 km natural corridor width policy.** The policy should not be interpreted to be a "continuous corridor". The location of Natural Core Areas and the actual use of the surrounding lands should be taken into account when assessing the 1.25 km corridor. In addition, the policies could clarify that opportunities through phasing and progressive rehabilitation are considerations in maintaining connectivity on the moraine.

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<sup>41</sup> APAO Integrated Resource Management for the Oak Ridges Moraine, September 2001

## Greenbelt Plan

### Overview

In December 2003, the Province introduced the Greenbelt Protection Act (Bill 27) which sought to create a Greenbelt Study Area in the Golden Horseshoe. The Province identified an immediate need to study an area in the Golden Horseshoe in order to protect environmentally sensitive land and farmland, and contain urban sprawl. The Act would establish a moratorium that would temporarily prevent new urban uses outside existing urban boundaries on rural and agricultural lands within key portions of the study area.

In May 2004, the Greenbelt Task Force released a discussion paper which outlined a number of proposed approaches for a "Golden Horseshoe Greenbelt". The vision for the Greenbelt was that it would be a permanent and sustainable legacy for current and future generations.

The discussion paper stated that to ensure the long-term protection of the features and functions of a natural system, compatible uses such as aggregate extraction can coexist with environmental protection, provided it does not hinder the integrity of the system. The paper recognized that the study area contained significant aggregate resources, both bedrock and sand & gravel, and that more than 75% of aggregate resources used in the greenbelt area come from the Oak Ridges Moraine and Niagara Escarpment areas.

The paper provided the following summary with respect to the regulatory environment for aggregate resources:

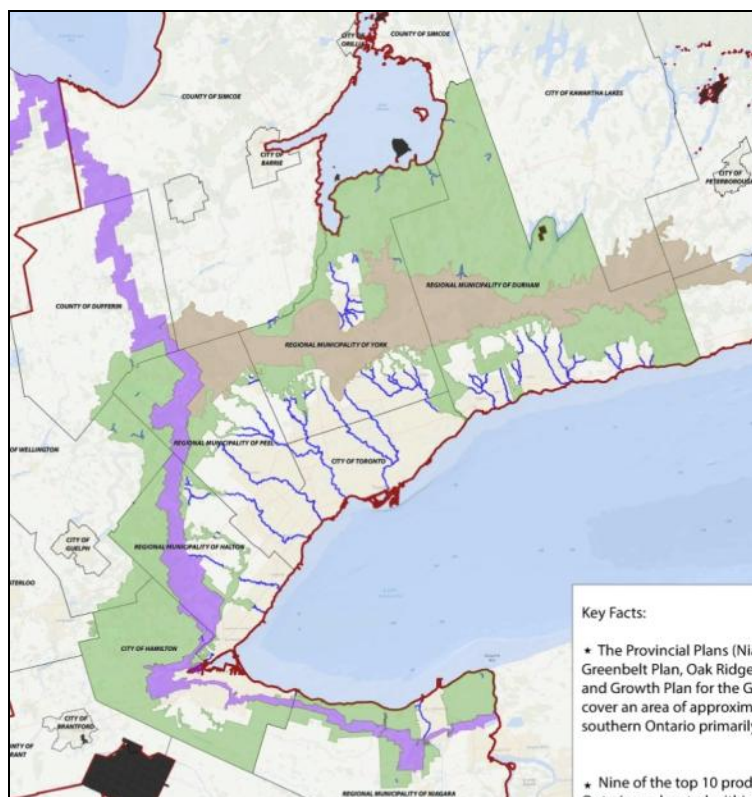
*"Over the past decade, the regulatory environment for aggregate extraction has become increasingly sophisticated, resulting in fewer new licenses for quarries. Most existing quarries were established in the 1950s, and are reaching the end of their deposits.*

*Mineral aggregate resources are non-renewable resources. Their proximity to market is one of the most significant factors in their overall cost. Since more than 90 per cent of mineral aggregate is moved by truck, transportation is one of the main factors in the cost of the resource not only in direct cost to the consumer, but also in its impacts on air quality. Shipping mineral aggregates long distances increases energy consumption and greenhouse gas emissions into the atmosphere. Proper planning for near-market extraction can reduce negative environmental impacts" (p. 21).*



The Greenbelt Protection Act came into effect in June 2004. Following the enactment, the Greenbelt Task Force provided advice and recommendations to the Minister of Municipal Affairs and Housing on creating a Golden Horseshoe Greenbelt. The Task Force recognized that defining the greenbelt would be a complex task and that good science and sound economics would be vital to maintaining the integrity of the greenbelt.

The Task Force recommended that areas that have been identified as high potential aggregate sites should be included in the greenbelt and that the Province should clarify what are appropriate provincial and municipal policies related to new aggregate applications. It was recommended that extraction be subject to more rigorous rehabilitation requirements. It was recognized that aggregate resources provide essential building materials for the housing that population growth requires and the availability of these resources close to market is important.



**Figure 16** The Greenbelt Plan Area (identified in green shade)

In February 2005, the Greenbelt Plan was established under the Greenbelt Act, to take effect as of December 2004. The Greenbelt covers over 800,000 ha of land in southern Ontario including the NEP and ORMCP Areas<sup>42</sup>. The Greenbelt Plan surrounds urban areas in the GTA and Hamilton. Not including the NEP or ORMCP, the Greenbelt Plan is approximately 420,000 ha in size (**Figure 16**).

The Greenbelt Plan is primarily located within the GTA, City of Hamilton and Region of Niagara however portions of the Plan extend into the County of Simcoe, County of Dufferin, County of Wellington

and Region of Waterloo. Eleven upper/single-tier municipalities and close to 40 lower-tier municipalities are located within the Greenbelt Plan.

<sup>42</sup> The Greenbelt Plan is intended to enhance the spatial extent of agriculturally and environmentally protected lands currently covered by the NEP and ORMCP while at the same time improving linkages between these areas and the surrounding major lake systems and watersheds. Most of the policies in the Greenbelt Plan do not apply to the NEP and ORMCP Areas.

As part of managing growth in the GGH, the Greenbelt identifies where urbanization should not occur in order to provide permanent protection to the agricultural land base and the ecological features and functions occurring on this landscape.

The Greenbelt Plan includes lands within, and is intended to build upon the ecological protections provided by the NEP and the ORMCP. While providing permanent agricultural and environmental protection, the Greenbelt also contains important natural resources and supports a wide range of recreational and tourism uses, areas and opportunities along with a rural and agricultural economy.

The vision for the Greenbelt is a broad band of permanently protected land which:

- Protects against the loss and fragmentation of the agricultural land base and supports agriculture as the predominant land use;
- Gives permanent protection to the natural heritage and water resource systems that sustain ecological and human health and that form the environmental framework around which major urbanization in south-central Ontario will be organized; and
- Provides for a diverse range of economic and social activities associated with rural communities, agriculture, tourism, recreation and resource uses.

The Protected Countryside designation applies to the entire Greenbelt Plan. The Protected Countryside includes an Agricultural System, Natural System and Settlement Areas. Lands in the Protected Countryside are within one of the following policy areas: Specialty Crop Areas, Prime Agricultural Areas, Rural Areas, Towns/Villages, Hamlets or Shoreline Areas.

The Natural Heritage System in the Greenbelt Plan is intended to identify areas with the highest concentration of the most sensitive and/or significant natural features and functions. **The Natural Heritage System applies to more than half of the Greenbelt Plan Area (215,800 ha). The Natural Heritage System is larger than each of the NEP and ORMCP Areas.**

All decisions on planning applications shall conform to the policies of the Greenbelt Plan. In addition, the Greenbelt Act requires that municipalities amend their official plan to conform to the Greenbelt Plan (most municipalities have completed conformity exercises for their official



plan). Municipal official plans cannot contain provisions that are more restrictive than the aggregate policies in the Greenbelt Plan<sup>43</sup>.

Aggregate resources are identified as non-renewable resources in the Greenbelt Plan. Among the goals of the Greenbelt Plan are the recognition of the benefits of protecting non-renewable natural resources, and provision for the availability and sustainable use of those resources critical to the region's social, environmental, economic and growth needs.

Aggregate extraction is permitted in the Protected Countryside and the Natural Heritage System. The Greenbelt Plan recognizes that aggregate resources provide significant building materials for communities and infrastructure, and the availability of aggregate close to market is important for both economic and environmental reasons.

The Greenbelt Plan recognizes that aggregate resources and aggregate operations need to be treated differently from other forms of development. This is primarily due to the following factors:

- The management of aggregate resources is a matter of Provincial interest.
- It is in the public interest to protect close to market resources.
- Aggregate resources are fixed in location and cannot be extracted anywhere.
- Aggregate extraction is an interim use where subsequent uses can be accommodated through rehabilitation.

Specific exception provisions apply to aggregate extraction within key features. Extraction is permitted within these features subject to specific criteria and certain limitations.

The Greenbelt Plan includes specific rehabilitation policies including establishing maximum disturbed area for both proposed and existing operations and rehabilitation targets for sites in the Natural Heritage System in terms of establishing forest cover no less than what existed prior to extraction (except for operations that extract below the water table).

Extraction is permitted within prime agricultural areas including specialty crop areas subject to specific criteria. The exception is that new operations are not permitted between Lake Ontario and the NEP in the Niagara Peninsula Tender Fruit and Grape Lands.

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<sup>43</sup> "With the exception of the lot creation policies of section 4.6, official plans and zoning by-laws shall not, however, contain provisions that are more restrictive than the policies of sections 3.1 and 4.3.2 as they apply to agricultural uses and mineral aggregate resources respectively" (Section 5.3, Greenbelt Plan).

The Greenbelt Plan recognizes the importance of aggregate resources by ensuring that they remain available and permitting extraction throughout the Plan Area subject to rigorous requirements that contribute to the goals and objectives of the Greenbelt.

The Natural Heritage System *"includes areas of the Protected Countryside with the highest concentration of the most sensitive and/or significant natural features and functions"*. The Natural Heritage System also contains areas that have the potential to be restored (e.g. agricultural and open fields). According to the Ministry of Municipal Affairs and Housing, the Natural Heritage System consists of the following:

- Core Areas (could be up to 50% non-natural features).
- Linkages that form connections between the cores (may not be natural features).
- Lands that have been restored or have the potential to be restored to a natural state.

The Greenbelt Plan allows aggregate extraction in the Natural Heritage System subject to specific criteria including maintaining connectivity, habitat replacement, maintaining or restoring key features, and rehabilitation requirements. The policies help ensure that there are only positive, long-term outcomes for the natural environment.

**There are opportunities through rehabilitation to enhance the Natural Heritage System, and create linkages and natural features where they may not have previously existed.** This was recognized by the Task Force during the development of the Greenbelt Plan as well as the existing policies which contemplate extraction within this system. These policies should be maintained and explicitly recognized in the review of the Greenbelt Plan.

The Greenbelt Plan recognizes the importance of the availability of close to market resources for both economic and environmental reasons, and for providing significant building materials for communities and infrastructure. Protecting and making provision for aggregate resources are among the goals of the Plan. **These strong fundamentals which recognize the Provincial interest in aggregate resources must be maintained and upheld.**

In general, the Greenbelt policies take a balanced approach to protecting environmental and agricultural resources while providing for non-renewable resources. The Greenbelt is a working countryside consisting of farms, agri-food uses, resource-based uses, infrastructure, pits and quarries and is not intended to be only a public park or open space.

## Aggregate Resources and Licences within the Greenbelt Plan

There are approximately 54,427 ha of significant aggregate resources located within the Greenbelt Plan<sup>44</sup>. The majority of these are selected bedrock resources from the Amabel, Guelph and Lockport Formations while the remaining are primary and secondary sand & gravel resources. Approximately 13% of the Greenbelt Plan contains significant aggregate resources.

These significant resource areas are located close to market and must be protected for the expansion and continued use of aggregate operations (along with the remaining significant resource areas in the Greenbelt).

There are currently 69 licences located within the Greenbelt Plan (56 pits and 13 quarries<sup>45</sup>). **The total licenced area of these sites is approximately 4,290 ha or 1% of the Plan Area.**

Since approval of the Greenbelt Plan in 2005, three applications only for expansions to existing aggregate operations have been approved in the Greenbelt<sup>46</sup> (two pits and one quarry). This represents one new licence every three years.

**The total licenced area of these approved operations is 149 ha which represents less than 0.1% of the total Greenbelt Plan Area.** The total reserves from these three expansions are approximately 27.5 million tonnes. In other words, an average of 2.75 million tonnes has been licenced in the Greenbelt each year since 2005.

There are currently ten active aggregate applications within the Greenbelt Plan (seven pits and three quarries; two new and eight expansions)<sup>47</sup>. The total licenced area of the proposed applications is 526 ha (0.1% of the Greenbelt Plan Area) with estimated reserves of more than 120 million tonnes. This is a substantial amount of sand & gravel, and bedrock resources that would be available in a close to market location.

Since 1990, 50 licences (1,402 ha) have been surrendered under the Aggregate Resources Act in the Greenbelt Plan Area.

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<sup>44</sup> Significant refers to ARIP primary and secondary sand & gravel, and selected bedrock resources.

<sup>45</sup> Includes portions of the Dufferin Acton Quarry and Walker Vineland Quarries which are primarily located within the NEP Area.

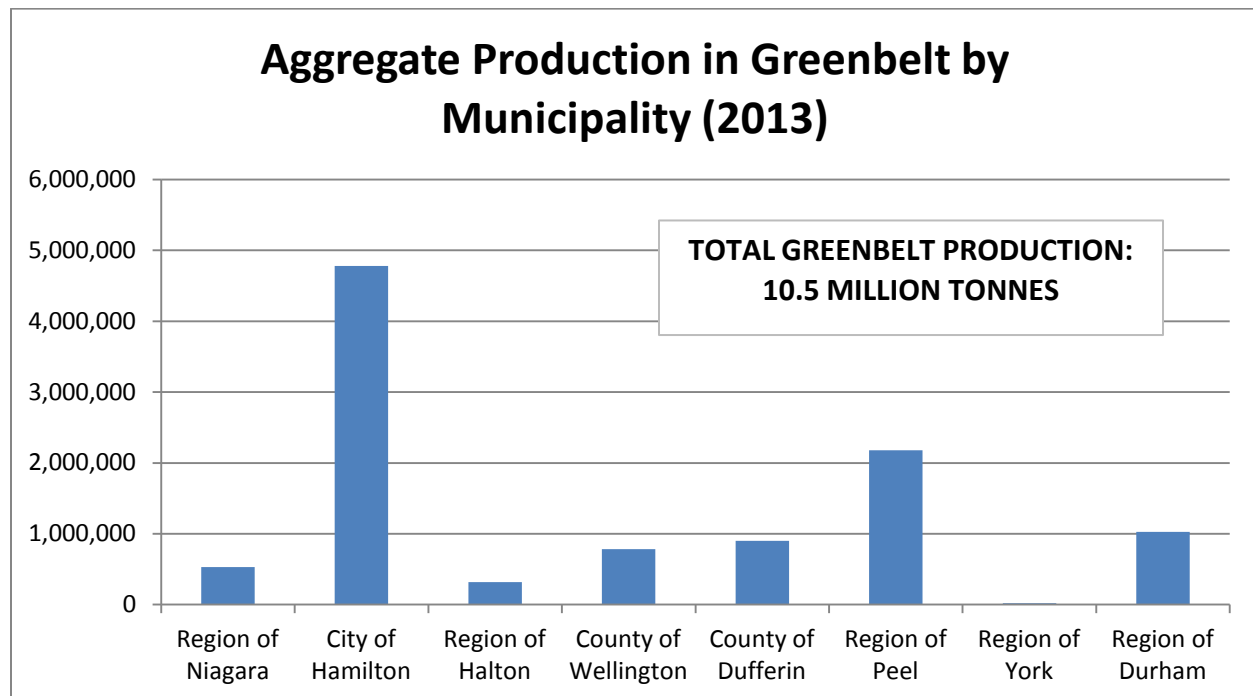
<sup>46</sup> Total accounts for applications that were subject to the Greenbelt Plan, and not grandfathered or exempted applications.

<sup>47</sup> Includes the Dufferin Acton Quarry Extension which is also located within the NEP Area.

Based on OSSGA's recent rehabilitation research, almost half of the studied sites within the Greenbelt were rehabilitated to natural uses (47%) followed by open space (11%) and agricultural uses (11%). Seventy-nine percent (79%) of the sites are now located within the Natural Heritage System.

## Greenbelt and Close to Market Supply

It is estimated that **approximately 10.5 million tonnes of aggregate were produced from the Greenbelt in 2013 (Figure 17)**. This equates to approximately 7% of Ontario's total aggregate production. For context, the Greenbelt would be the highest producing municipality in Ontario which is largely due to its size but also the presence of significant bedrock and sand & gravel resources.



**Figure 17** Aggregate Production in Greenbelt by Municipality (2013)

All of the 10.5 million tonnes are extracted within the GGH. **In 2013, approximately 13% of the GGH's total aggregate consumption was supplied from the Greenbelt.**

Of the Greenbelt's 10.5 million tonnes, the share between sand & gravel, and bedrock resources is relatively even. The sand & gravel resources are primarily extracted north and east of Halton within Wellington, Dufferin, Peel and Durham. A regionally significant amount of sand & gravel is

extracted from the Fonthill Kame where such resources are limited in Niagara. All of the bedrock resources are extracted above the Niagara Escarpment within Hamilton, Halton and Niagara.

## Current Issues

### Extraction within Significant Woodlands and Species at Risk Habitat

Aggregate extraction is permitted within significant woodlands if they contain young plantations or early successional habitat. The PPS permits extraction within significant woodlands if it is demonstrated that there are no negative impacts on the feature or its ecological functions. The Greenbelt policies with respect to rehabilitation and reforestation recognize the positive attributes of aggregate operations as interim uses. **The Greenbelt significant woodland limitation should be reviewed to determine whether it is reasonable to limit extraction to young plantations and early successional habitat.**

Similar to the significant woodlands policy, aggregate extraction is not permitted within the significant habitat of endangered and threatened species. Recent changes to the PPS provide an exception in recognition of provincial and federal requirements (e.g. authorizations under the Endangered Species Act). This policy should be recognized in the Greenbelt Plan.

### Municipal Official Plan Implementation

Implementation of the Greenbelt Plan can vary by municipality. **While it is recognized that the geographic, social and economic conditions of one municipality in the Greenbelt may vary from another, there should be consistency in ensuring that significant aggregate resources are made available consistent with the applicable policies.**

If changes or revisions occur to the Greenbelt Plan and subsequent municipal conformity exercises are required, interested parties should continue to have the ability to appeal the resulting official plan process in accordance with the provisions of the Planning Act. Such appeal rights are an important part of the planning process in Ontario. This is especially true considering the complexity and interrelationship between the PPS, Provincial Plans and local objectives. Municipalities cannot be more restrictive than the Greenbelt Plan policies for aggregate resources.

## Potential Greenbelt Expansion

In 2008, the Province released criteria to be used when considering requests from municipalities to expand the Greenbelt. It is our understanding that during this review, expanding the Greenbelt may be a significant topic of discussion<sup>48</sup>.

**If the Province contemplates an expansion of the Greenbelt (presumably “outside” of the Greenbelt within the GGH), the presence of significant aggregate resources beyond and adjacent to the existing Greenbelt Area must be considered.** The explicit recognition that aggregate resources are a matter of provincial interest and that their availability close to market is important for economic and environmental reasons must continue.

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<sup>48</sup> Premier Wynne's Mandate Letter to Minister of Municipal Affairs & Housing (September 25, 2014)

## Summary

**Making aggregate resources available within the Provincial Plan Areas is required to meet the high quality aggregate demands of the GGH, replace diminishing supplies and reduce environmental and economic impacts of importing aggregate further from market.**

Aggregate resources are literally the foundation of Ontario's economy and society. Aggregate resources are used to build and maintain Ontario's infrastructure.

The GGH has a major infrastructure deficit. The Province is investing more than \$130 billion in public infrastructure over the next 10 years including \$31.5 billion in dedicated funds available for public transit, transportation and other priority infrastructure projects under Moving Ontario Forward. In the GGH, over 2 billion tonnes of aggregate will be needed over the next 25 years to build and maintain required infrastructure (approximately 90-100 million tonnes per year).

The aggregate resources of the Provincial Plan Areas are the closest to market resources for most of Ontario's major urban areas. The Niagara Escarpment Plan, Oak Ridges Moraine Conservation Plan and Greenbelt Plan contain very high quality deposits of limestone and sand and gravel, critical to the construction of high quality infrastructure in the GGH:

- **In 2013, the Provincial Plan Areas supplied approximately 35% of GGH's total aggregate needs.**
- **Eight of the top 10 aggregate producing municipalities are located within at least one of these three Provincial Plans.**
- **Aggregate production from the Provincial Plans accounts for approximately 20% of Ontario's total production.**

While the Provincial Plan Areas contribute a significant amount of production, **only 1.5% of these Plan Areas are licenced for aggregate extraction.** Of the 1.5% that is licenced for extraction, only 37% of this area is disturbed while the remaining area is rehabilitated or has not been extracted (**0.6% of the Provincial Plan Areas are subject to active aggregate extraction**).

There is a provincial interest in maintaining a readily available supply of close to market aggregate in order to minimize environmental and social impacts, and transportation costs.

The Plan Reviews should be based on implementation experience with operations approved since each of the Plans came into effect.

**Fundamentally, the Provincial Plan Review should not consider any new prohibitions on consideration of aggregate extraction.** Policies providing for the management of aggregate resources have been deemed necessary to meet the objectives of legislation including upholding matters of provincial interest. The Provincial Plans already include strong protection for significant environmental features. Locations where aggregate extraction may be considered are limited by policy and the existing tests for new extraction are onerous so that only environmentally acceptable sites with opportunities for contributions to ecological integrity are approved.

### Niagara Escarpment Plan

The Niagara Escarpment Plan (NEP) has a longer history compared to the other Provincial Plans including more thorough and comprehensive policy reviews. There has been more study, public hearings, public consultation, involvement of Provincial ministries and implementation experience. As a result, it is a well established principle that the NEP objective of allowing consideration of aggregate extraction in the Escarpment Rural Area is in accordance with the purpose and objectives of the Niagara Escarpment Planning and Development Act (NEPDA).

The balance that has been secured protects the Escarpment Natural Area and Escarpment Protection Area as aggregate extraction is not a permitted use and the policies do not provide for its consideration (71% of the Plan Area is protected from extraction). In addition, the actual escarpment feature is protected from development and site alteration.

The objectives of the Escarpment Rural Area allow for consideration of extraction subject to strict environmental criteria and considerations contained in the NEP as well as municipal official plans, the Provincial Policy Statement (PPS) and Aggregate Resources Act. Only a small portion of the NEP Area has potential to supply aggregate resources (12.5%).

Making resources available from a close to market location within the NEP has been determined to be sound and prudent public policy. Notwithstanding, there remains philosophical and special interest pressure to prohibit extraction from the entire Plan Area. Any proposal to significantly alter the balance that has been achieved would have to be justified based on implementation experience that definitively demonstrated that the current policies were not working and there



would be substantial environmental harm incurred by continuing to accommodate aggregate extraction within the Escarpment Rural Area.

In fact, implementation experience demonstrates that the current policies are functioning as intended. Since the NEP came into effect in 1985, the amount of land redesignated from former aggregate operations has doubled the amount of newly licenced land within the NEP. This is a clear demonstration that aggregate extraction is an interim use that can accommodate subsequent uses that are compatible with the escarpment environment. Planning for aggregate availability must recognize this important component by including rehabilitation opportunities as a factor in the consideration of new licence applications.

The policies in the NEP are the oldest of the three Provincial Plans and therefore most in need of fine-tuning and updating to be more consistent with current terminology and practice, and applicable legislation. While some aspects of the NEP are unique to the escarpment landscape, and purpose and objectives of the NEPDA, many others are more generic and deal with common elements of natural heritage planning.

For example, the PPS, recent Provincial Plans and current Provincial legislation provide consistent definitions, delineation and strong protection for features such as significant wetlands, significant woodlands, species at risk habitat, prime agricultural areas and wellhead protection areas. There is no rationale for treating these features differently in the NEP Area.

The PPS should be used as the standard for those features and areas that are not unique to the escarpment landscape. The policies related to the protection and use of natural heritage, agriculture, water and aggregate resources should be consistent with the PPS within the Escarpment Rural Area designation.

The policies within the Escarpment Rural Area should continue to have an objective to provide for new licenced supply while minimizing environmental and social impacts. Due to the unique attributes of the escarpment, the Escarpment Rural Area policies could be improved by providing for a higher standard of rehabilitation to provide long-term public benefits.

### **Oak Ridges Moraine Conservation Plan**

Prior to the Oak Ridges Moraine Conservation Plan (ORMCP), planning for the Oak Ridges Moraine recognized the correlation between the geological landform and the close to market aggregate resource.

One of the main drivers for the development of a Provincial Plan on the moraine was protection of its hydrogeological function (described as southern Ontario's rain barrel). It is well established that there is no negative impact on the hydrologic or hydrogeological functions of the moraine as a result of aggregate extraction. The science has not changed and recent Source Water Protection planning has confirmed that extraction is not a threat to water supplies.

The ORMCP review should include an examination of the policies on extraction in Natural Core Areas. Prohibiting new extraction in the Natural Core Area was one of the more contentious issues when the ORMCP was proposed recognizing that the Natural Core Area does not necessarily contain significant natural features, and rehabilitation could enhance the function of the core area.

The ORMCP limits extraction to above the water table in Natural Linkage Areas. No hydrogeological basis has been established for this restriction. The net effects of below water table extraction on the water balance are normally minor and localized. There should not be arbitrary restrictions on the amount of aggregate that can be removed from sites that could be licenced in the Natural Linkage Area.

These restrictions represent a significant reduction in the amount of aggregate that can be considered for extraction. The direct implication is the need to transport materials from further from market sources which has well established economic, social and environmental consequences.

## **Greenbelt Plan**

Aggregate resources are identified as non-renewable resources in the Greenbelt Plan. Among the goals of the Greenbelt Plan are the recognition of the benefits of protecting non-renewable natural resources, and provision for the availability and sustainable use of those resources critical to the region's social, environmental, economic and growth needs.

Aggregate extraction is permitted in the Protected Countryside and the Natural Heritage System. The Greenbelt Plan recognizes that aggregate resources provide significant building materials for communities and infrastructure, and the availability of aggregate close to market is important for both economic and environmental reasons.

The Greenbelt Plan recognizes that aggregate resources and aggregate operations need to be treated differently from other forms of development. Aggregate extraction is permitted in the

Natural Heritage System subject to specific criteria including maintaining connectivity, habitat replacement, maintaining or restoring key features, and rehabilitation requirements. The policies help ensure that there are only positive, long-term outcomes for the natural environment. There are opportunities through rehabilitation to enhance the Greenbelt Natural Heritage System, and create linkages and natural features where they may not have previously existed.

In general, the Greenbelt policies take a balanced approach to protecting environmental and agricultural resources while providing for non-renewable resources. The Greenbelt is a working countryside consisting of farms, agri-food uses, resource-based uses, infrastructure, pits and quarries and is not intended to be only a public park or open space. The strong fundamentals which recognize the Provincial interest in aggregate resources must be maintained and upheld in the Greenbelt Plan.

