

## 4. LAND USE / SOCIO-ECONOMIC ENVIRONMENT

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### 4.1 LAND USE POLICIES, GOALS, OBJECTIVES

#### 4.1.1 First Nations Land Claims

The GTA West Preliminary Study Area does not currently include any First Nations reserves or land tracts. However the Mississaugas of the New Credit has recently settled the Toronto Purchase Specific claim with the Government of Canada, which involves large tracts of land within and beyond the GTA West Preliminary Study Area.

The Project Team has commenced discussions with the Mississaugas of the New Credit as well as Six Nations of the Grand River Territory, to provide an introduction to the study, the study process and establish an open forum of communication to allow for exchange of First Nations traditional knowledge and potential interest(s). First Nations engagement will include meetings with the Six Nations Community, Committee(s), Council and Confederacy (Traditional Council) and with the Mississaugas of the New Credit Community, Committee(s) and Council as well as staff at both offices. The Project Team will be discussing Land Claims to ensure all claims are known and accurately reflected in the study documentation.

#### *Grand River Notification Agreement*

The Grand River Notification Agreement was a result of three common concerns shared by the First Nations and municipalities located along the Grand River (i.e., west of the Preliminary Study Area). These shared concerns include First Nations land claims, concern for environment sustainability, and the recognized need to improve the sharing of information. The Agreement has proven to be an example of improved communication and information exchange, and a foundation for improving relationships between municipalities and First Nations.

According to the Indian and Northern Affairs Canada (INAC) the Grand River Notification Agreement was originally signed in October 1996 by the Mississaugas of the New Credit; the Six Nations of the Grand River; Canada, represented by the Minister of Indian Affairs; Ontario, represented by the Minister of Native Affairs; the County of Brant; the Regional Municipality of Haldimand-Norfolk; the City of Brantford; the Towns of Dunnville, Haldimand and Paris; the Townships of Brantford, Onondaga and South Dumfries (currently under the County of Brant); and the GRCA. The Agreement was renewed in October 1998. Portions of the GTA West Preliminary Study area lie within the fishing and hunting portion of the Grand River Notification Area.

#### 4.1.2 Provincial Land Use Planning/Goals/Objectives

The *Growth Plan* has been introduced in Section 2.1.

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Section 3.2.2.3 of the *Growth Plan* relates to the “development, optimization, and/or expansion of new or existing transportation corridors.” The *Growth Plan* states that government bodies will:

- Ensure that corridors are identified and protected to meet current and projected needs for various travel modes;
- Support opportunities for multi-modal use where feasible, in particular prioritizing transit and goods movement needs over those of single occupant vehicles;
- Consider increased opportunities for moving people and moving goods by rail, where appropriate;
- Consider separation of modes within corridors, where appropriate; and
- For goods movement corridors, provide for linkages to planned or existing inter-modal opportunities where feasible.

Municipal Official Plans and planning decisions must conform to the *Growth Plan*.

The *Growth Plan* identifies proposed transportation infrastructure intended to move people and goods efficiently within and through the GGH. These plans are conceptual in nature and need to be supported through appropriate studies such as this EA.

Schedule 6 of the *Growth Plan* identifies a Future Transportation Corridor extending from Guelph (in the west) to Highway 400 (in the east), north of Highway 401 and Highway 407. In the same area, the *Growth Plan* shows a northward extension of Highway 427 to a terminus south of the Oak Ridges Moraine.

Other Future Transportation Corridors shown in the *Growth Plan* include:

- A conceptual Future Transportation Corridor from the western GTA, through the Niagara Peninsula to the border with the United States at Fort Erie. This Future Transportation Corridor lies within the area covered by the ongoing Niagara to GTA Transportation Corridor EA; and
- A conceptual Future Transportation Corridor from the termination of Highway 407 in Pickering east towards Highway 35/115 to Peterborough with connections south to Highway 401. This project has now entered preliminary design planning.

The *Growth Plan* directs that the majority of growth will occur in designated Urban Growth Centres. It identifies four Urban Growth Centres within the GTA West Preliminary Study Area, namely, Downtown Milton, Downtown Guelph, Downtown Brampton, and the Vaughan Corporate Centre. The *Growth Plan* also identifies three Urban Growth Centres, Uptown Waterloo, Downtown Kitchener, and Downtown Cambridge, close to the Preliminary Study Area in the west, as well as many Urban Growth Centres close to the Study Area in the south and east. Those to the north of the GTA are also important since connections between north and west are of relevance to this corridor.

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#### 4.1.3 Municipal Land Use Planning/Goals/Objectives

The Study Area contains a range of land uses, including urban areas, small villages, agricultural operations, rural residential, natural or environmental resource areas, and recreational features. A description of land use within the analysis area by municipality provides a summary of the land uses throughout the Preliminary Study Area. **Exhibit 4-1** provides a generalized land use map of the Preliminary Study Area, based on recent land use designations.

Municipal Official Plans are used to designate future land uses with each municipality. The Upper Tier municipalities, Wellington County, Halton Region, Peel Region and York Region, publish broad land use Official Plans that are followed in greater detail by the lower tier municipalities within their Region. The City of Guelph is a single tier municipality, therefore it does not implement an upper tier plan.

The land use analysis to date has included gathering secondary source land use information from Wellington County, Halton Region, Peel Region, York Region as well as local municipalities in the Preliminary Study Area. Insight into current development pressures, key development applications and other current land use and land use planning issues within the Preliminary Study Area was obtained through the collection of Official Plans, economic development plans, and discussions with municipal staff. As the EA continues, more discussions and reviews with municipalities will take place to ensure that development progress is kept up-to-date and that the study reflects each municipality's current land use and socio-economic situation.

#### *Wellington County*

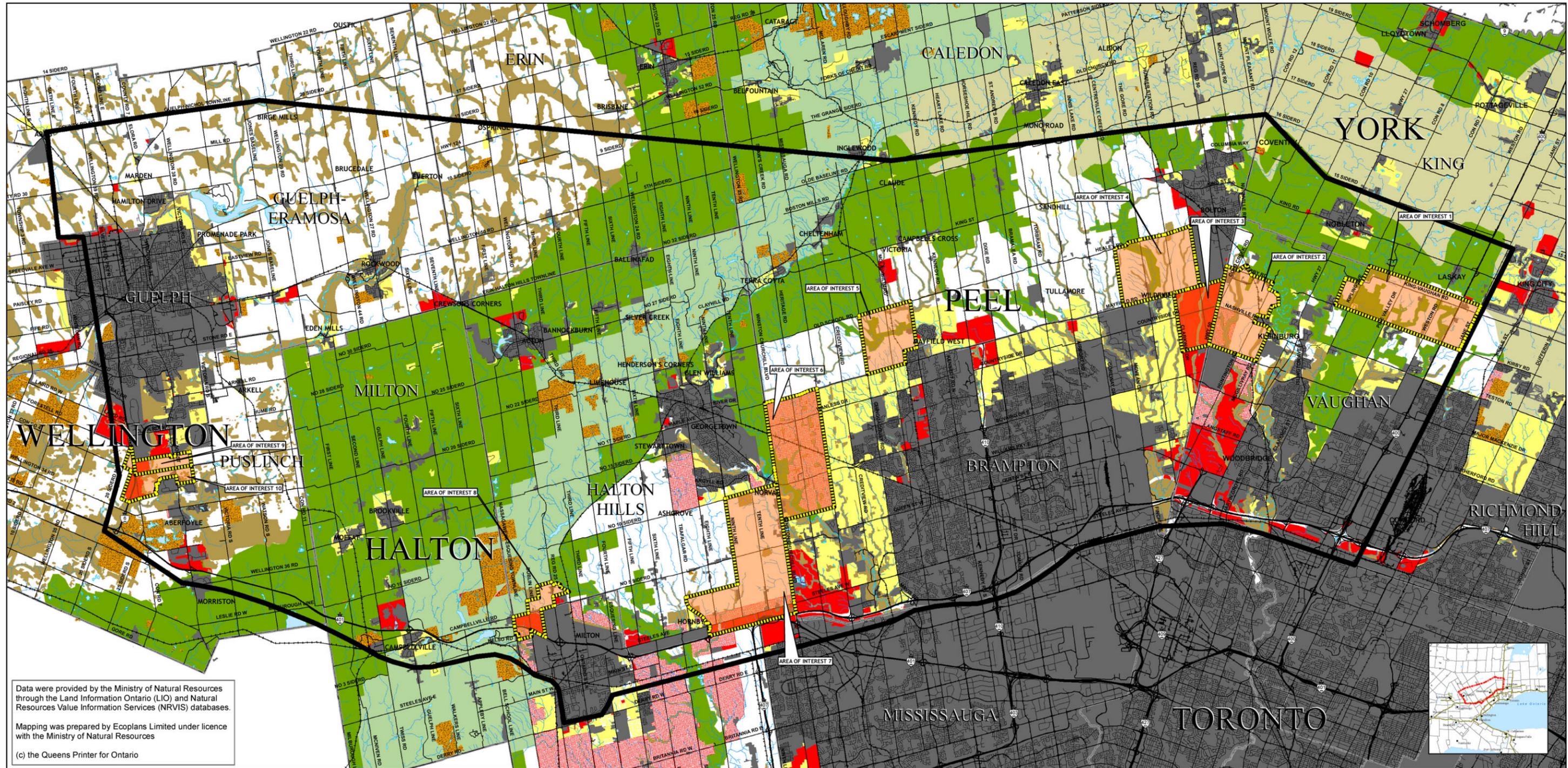
Wellington County is located at the western end of the Preliminary Study Area and is the upper tier municipality for seven lower tier municipalities. Lower tier Official Plans must conform to the County Official Plan.

In the Preliminary Study Area, Wellington County includes two towns (Minto and Erin), and five townships (Puslinch, Centre Wellington, Guelph/Eramosa, Mapleton, and Wellington North). The County surrounds the City of Guelph; however the City is not part of the County. The urban growth pattern within the County has generally been within communities adjacent to water sources and transportation corridors, primarily the Grand River tributaries, Highway 401 and arterial roads. Statistics Canada Census (2001) shows that Wellington County, excluding the City of Guelph, had a population of 81,143 in 2001. Statistics Canada Census (2006) shows that Wellington County had a population of 85,482 in 2006, a 5.3% increase from 2001.

The Wellington County Official Plan designates broad land use patterns within the County of Wellington. The Official Plan includes maps showing the urban areas, natural areas, and agricultural areas within the County.

The Official Plan identifies Prime Agricultural Lands within the County. Policies in the Official Plan feature protecting Agricultural lands over the long-term.

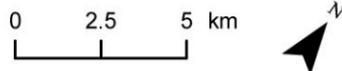
The Official Plan also identifies significant environmental areas. The Official Plan features protection and enhancement of ESAs over the long-term.



Data were provided by the Ministry of Natural Resources through the Land Information Ontario (LIO) and Natural Resources Value Information Services (NRVIS) databases.  
Mapping was prepared by Ecoplans Limited under licence with the Ministry of Natural Resources  
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Date: May 2010



**Legend**

- Built-Up Area
- Pit/Quarry
- Designated Residential Area
- Designated Employment Area
- Future Urban Area
- Niagara Escarpment Plan
- Oak Ridges Moraine
- Greenbelt - Protected Countryside
- Environmental Policy Area
- Agricultural and Rural Area
- Preliminary Study Area

**Exhibit 4 - 1**

**Municipal Land Use**

**GTA West Corridor Planning And Environmental Assessment Study - Stage 1**  
**Overview of Environmental Conditions and Constraints Working Paper**

*Overview of Environmental Conditions and Constraint Working Paper December 2010**City of Guelph*

The City of Guelph, located on the western boundary of the Preliminary Study Area, is a single-tier municipality and does not conform to an upper-tier municipality's land use plan. The City is physically surrounded by the County of Wellington, thus, their land use intents are closely tied. Statistics Canada Census (2006) shows that the City of Guelph had a population of 114,943 in 2006, an 8.3% increase from 2001.

The City of Guelph Official Plan was adopted by City Council on November 1, 1995, with the latest consolidated version dated November 2006. The City is currently undertaking a Growth Management planning exercise to ensure that the Official Plan conforms to the *Growth Plan*. The *Growth Plan* designates Downtown Guelph as an Urban Growth Centre, and projects Guelph's population and employment numbers to be higher than they are estimated in the current Official Plan. The City has recently updated its Official Plan (OPA #39) to plan for a population of 175,000 and an additional 37,400 jobs by the year 2031.

The City of Guelph Official Plan designates the urban area and rural area within the City's boundaries (i.e., residential, commercial, institutional and industrial land uses, greenlands, ESAs, and open space/parks). Many urban areas are already in the development process or being considered for future development plans.

Much of the City of Guelph's land area has been designated as part of the Greenlands System and Open Space System. The intent of the Official Plan is to maintain and enhance the Greenlands System areas as a permanent resource for the community.

Transportation policies designed to develop an integrated transportation system including road, bicycle, public transit, pedestrian, and rail are outlined in Section 8 of the City of Guelph Official Plan. The Official Plan encourages an efficient transportation system and an increased modal split between private vehicles and transit.

*Halton Region*

Halton Region, located in the middle of the Preliminary Study Area, has four lower tier municipalities in its jurisdiction. They are the Town of Oakville, City of Burlington, Town of Milton, and the Town of Halton Hills. Oakville and Burlington are largely urbanized or slated for urbanization south of Highway 407. North of Highway 407 and south of Highway 401 are mainly agricultural lands and small villages. The Town of Milton's urban area is located along Highway 401, and the Town of Halton Hills' urban areas (including 401/407 Employment Areas, Acton and Georgetown) are located north of Highway 401. Statistics Canada Census (2006) shows that the Region of Halton had a population of 439,256 in 2006, a 17.1% increase from 2001.

Halton Region's Official Plan was approved in 1995, with the most recent office consolidation dated August 17, 2006. The Region underwent a 3-year review to bring the Official Plan into conformity with the *Growth Plan* and to ensure its consistency with the PPS. On December 16, 2009, Halton Regional Council adopted ROPA 38, "An amendment to incorporate the Results of Sustainable Halton, Official Plan Review Directions and Other Matters."

On June 3, 2009, Regional Council adopted ROPA 37, a Regional Official Plan Amendment that incorporates the growth management directions of the *Growth Plan* into the Regional Official Plan. ROPA 38, adopted by Regional Council on December 16, 2009, allocated a projected

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population of 238,000 residents and 114,000 jobs in Milton and 94,000 residents and 43,000 jobs to 2031 in Halton Hills. Given that the combined 2006 Census populations for Milton and Halton Hills was approximately 109,000, it is anticipated that greenfield development to accommodate over 220,000 new residents in Milton and Halton Hills will occur to 2031. Similar employment-type development will also be provided. Much of the land within Halton Hills is within the Greenbelt and the Niagara Escarpment Plan Area. Water and sewer servicing is currently constrained in the urban areas of Halton Hills. Future large-scale urban growth will not be possible until these issues are resolved. Given the availability of services and the need for Halton Region to meet its population and employment growth targets in the *Growth Plan*, it is highly likely that much of the non-urban unprotected lands within Milton will be urbanized in the future. ROPA 37 was approved by the Ministry of Municipal Affairs and Housing on November 27, 2009. ROPA 38 has not yet been approved by the Ministry (as of October 30, 2010).

The Halton Regional Structure is classified into a number of broad land use categories. These categories are meant to provide guidance to the lower tier municipalities with further detail of the land use coming from their local Official Plans. The policies of the Regional Official Plan were updated through ROPA 38 (also known as 'Sustainable Halton'), adopted by Regional Council on December 16, 2009.

The Regional Greenlands System has been designed to protect and enhance the important natural features, forest cover and watercourses in Halton. The Niagara Escarpment dominates the topography of Halton Region, running from the southwest to the northeast. The Agricultural Rural Area is planned "*to maintain a permanently secure, economically viable agricultural industry and to preserve the open-space character and heritage of Halton's non-urbanized areas.*" The Urban Areas are the planned locations for urban growth in the Region, and include undeveloped lands east of Milton, the employment lands corridor along Steeles Avenue and facing Highway 401 in Halton Hills and lands north of 10 Side Road and east of Trafalgar Road to the south of Georgetown.

The Regional Official Plan Map 3 provides an overview of major transportation facilities in the Region. Highways, regional arterial roads, and transit facilities are shown connecting Burlington, Oakville, Milton and the Highway 401/407 Employment Area in Halton Hills. Georgetown is located a short distance (approximately 10.0 kilometres) north of Highway 401, with the primary access being from Trafalgar Road. Acton is a further 15.0 kilometres northwest of Georgetown, on the Niagara Escarpment. Primary access from Georgetown is from Highway 7. Transit systems are shown between Burlington and Oakville, but do not connect Milton, Acton or Georgetown to the rest of Halton Region.

### *Peel Region*

Peel Region, located in the centre of the Preliminary Study Area (i.e., immediately east of Halton) has three lower tier municipalities in its jurisdiction: the City of Brampton, the Town of Caledon, and the City of Mississauga. Brampton and Mississauga are largely urbanized or slated for urbanization. The Town of Caledon comprises mainly agricultural land, small villages, and urban centres. Statistics Canada Census (2006) shows that the Region of Peel had a population of 1,159,405 in 2006, a 17.2% increase from 2001.

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The Region of Peel Official Plan (Regional Official Plan) was adopted by Peel Region on July 11, 1996. The latest Region Official Plan to be released is an Office Consolidation dated November 2005.

The Regional Official Plan reflects the diversity of Peel Region; largely urbanized area in the south (i.e. Mississauga and Brampton), and largely rural area in the north (i.e., Caledon). The Regional Official Plan designates the settlement areas which are further refined through the lower tier Official Plans of Caledon, Brampton, and Mississauga. Mississauga and Brampton, excluding a section in the northwest, are shown within the Urban Area. Caledon is shown as rural with existing settlement areas including Caledon East, Alton, Bolton, Palgrave, Mayfield West Settlement and Caledon Village. Development in Caledon is to be directed primarily to existing settlement areas.

There is significant pressure for development on the remaining greenfield lands in Brampton. Much of this area is currently going through two Secondary Plan processes:

- Secondary Plan Area 47, Highway 427 Industrial Secondary Plan. This area is bounded by Mayfield Road to the north, The Gore Road to the west, Castlemore Road to the south and Highway 50 to the east. City Staff have recommended designating an additional 110 hectares in northeast Brampton as part of its Growth Plan Conformity Official Plan Amendment, with further lands recommended to be designated in northwest Brampton. It is anticipated that this development pressure will continue, with actual construction commencing in the near future (See Area #3 in Section 4.1.3.1 of this report).
- Secondary Plan Areas 52 and 53, Mount Pleasant Secondary Plan Huttonville North Secondary Plan. The placement of these lands into Brampton's urban area was approved by the Ontario Municipal Board in 2006 (See Area #5 in Section 4.1.3.1 of this report). Long-term planning for these areas is in final stages as the City has completed secondary planning for this area and final block plans are being prepared.

The Town of Caledon is currently completing two urban area expansion studies. Lands located west of Bolton, north of Mayfield Road have received Council endorsement for inclusion as part of the Bolton Urban Area. The Town is in the process of completing Secondary Plans in this area, primarily for employment uses.

The Mayfield West Secondary Plan will include a major expansion to the urban designations west of the current Mayfield urban area on the west side of Highway 10. The secondary planning process in this area is nearing completion.

The Regional Official Plan emphasizes the protection and maintenance of natural heritage systems and a designated Greenlands System within Peel Region over the long-term. While Brampton and Mississauga do have some areas designated Greenlands, the majority of the Greenlands system in Peel Region is located in Caledon.

Areas in the northern Region of Peel include *Oak Ridges Moraine Conservation Plan* and the *Niagara Escarpment Plan* areas. All land use planning within the jurisdictions of these plans must conform to these Provincial Plans, as noted in the Regional Official Plan.

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Areas in the Region designated as Prime Agricultural Areas, as defined in the PPS, are provided with long-term protection for agricultural land uses.

The Regional Official Plan also designates High Potential Mineral Aggregate Resource Areas. The designated areas are located outside of the urban area boundary in the northwest of Brampton and Caledon. High Potential Mineral Aggregate Resource Areas identify locations where potential aggregate resources could be found, and are not intended as a land use designation allowing extraction. Northwest Brampton has large deposits of shale resources and some of this land has been protected for future shale extraction, although this protection has a limited timeframe.

The Regional Official Plan directs all municipalities to develop an effective and integrated transportation system within Peel Region and neighbouring communities. It calls for transportation development to balance ecological, social, and economic needs.

*York Region*

York Region is located at the eastern end of the Preliminary Study Area and has nine lower tier municipalities in its jurisdiction. They are the Town of Aurora, the Town of East Gwillimbury, the Town of Georgina, the Township of King, the Town of Markham, the Town of Newmarket, the Town of Richmond Hill, the City of Vaughan, and the Town of Whitchurch-Stouffville. The communities of Aurora, Markham, Newmarket, Richmond Hill and Vaughan are largely urbanized or slated for urbanization with some rural areas remaining. East Gwillimbury, Georgina, King, and Whitchurch-Stouffville have smaller urban centres and hamlets, with the majority of land in rural uses. Statistics Canada Census (2006) shows that the Region of York had a population of 892,712 in 2006, a 22.4% increase from 2001.

The Region adopted a new Official Plan in December 2009. That Plan is subject to a number of site appeals and is therefore not finally approved. The Regional Official Plan show conceptual Controlled Access Highways (GTA West) in the area of Highway 400 west to the Regional boundary with Peel Region and an extension of Highway 427 to the conceptual GTA West corridor. The Regional Official Plan provides general guidance that is further refined through lower tier municipal official plans.

The Regional Official Plan is organized into three themes: Natural Environment; Economic Vitality; and Healthy Communities.

The Sustainable Natural Environment section of the Regional Official Plan identifies goals and objectives for the maintenance and protection of the environment. It establishes a Regional Greenlands System with the intent of protecting, restoring, and enhancing designated natural features and areas. It also identifies Land Resources, Water Resources, Air Quality, and the Oak Ridges Moraine as vital parts of a complete natural environment. Each of these parts has detailed goals and objectives outlining ways in which the Region will protect and enhance the natural environment.

The Regional Official Plan emphasizes Regional Centres as outlined on Map 5 of the Plan as the focus of development where residential, employment, recreational, cultural and government functions should be concentrated.

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In recent years, there has been a major expansion of residential and commercial development in Vaughan adjacent to Highway 400 north to Teston Road. The City of Vaughan and the Region of York have recently approved Official Plan Amendments that would extend the urban area north from Teston Road to the King-Vaughan Line on either side of Highway 400.

Section 6.1 of the Regional Official Plan indicates that new road infrastructure should be designed in such a way as to support all modes of transportation and is supportive of future urban development within the Region. The diversification of available transportation modes is emphasized as an important step in the reduction of automobile use by commuters.

The City of Vaughan has also adopted a new Official Plan as of September 7, 2010. That Plan identifies a conceptual GTA West Corridor from Highway 400 to the westerly limit of the City and an extension of Highway 427 to that corridor. The Plan has not finally approved by at this time (October 2010).

#### 4.1.3.1 Municipal Development Pressures

There are ten areas within the Preliminary Study Area that are currently under considerable development pressure. Generally, they are located on the fringe of existing urban areas and north of the built up sections in the GTA.

These areas have been identified by the Project Team through discussions with municipal staff and are based on a review of the status and pace of development applications and municipal planning studies in the Preliminary Study Area in relation to existing built-up boundaries and designated urban boundaries.

The following review was undertaken using the current understanding of Official Plan designations (i.e., in spring 2008 and updated in May 2010) and discussions with municipal staff. The ten areas are described below.

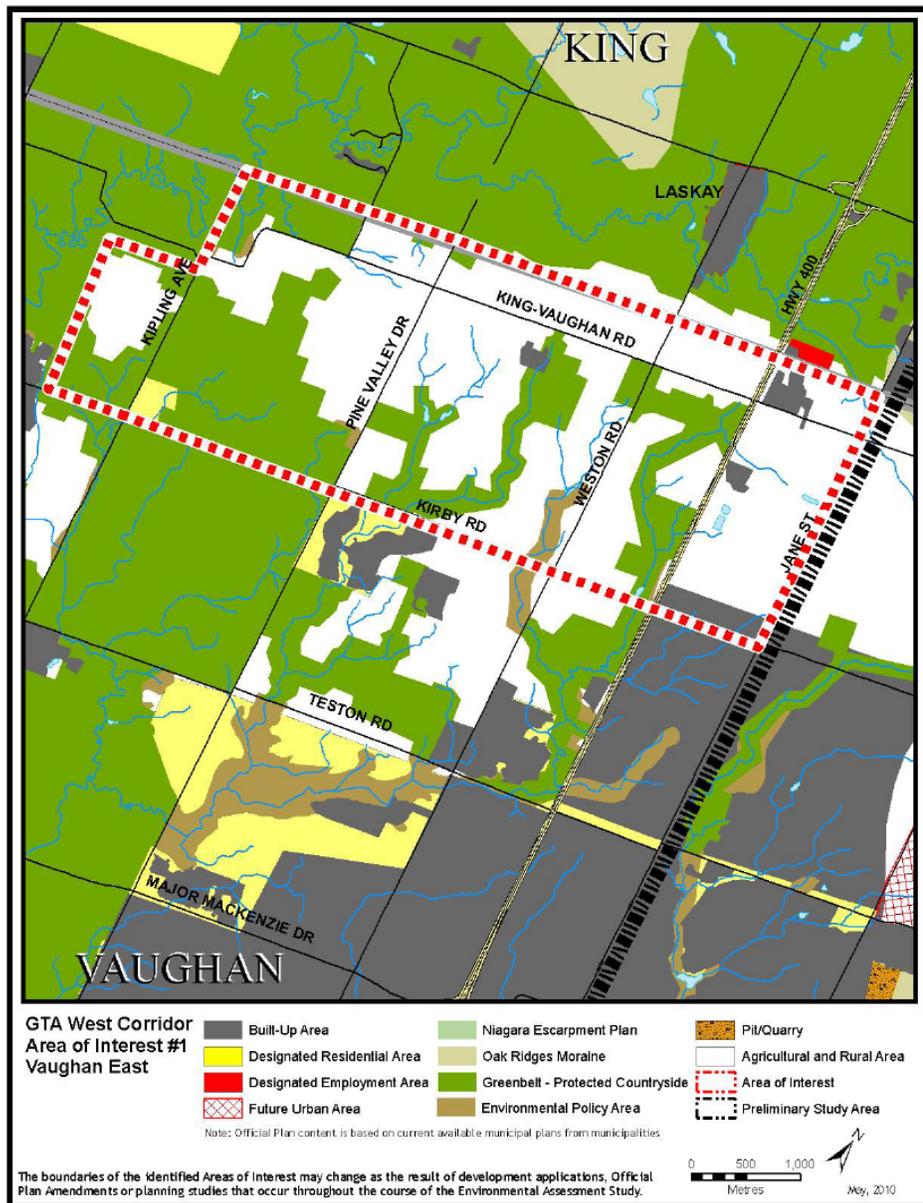
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**Area #1 – Highway 400 Corridor at Kirby Road**

Location: Area #1 is located outside the current Official Plan designated urban boundary in Vaughan. The area borders include Teston Road in the south, to the King-Vaughan boundary in the north, Jane Street in the east, and Weston Road in the west.

Plan Type: A New Secondary Plan for employment lands.

Plan Status: The Official Plan Amendment was adopted by the City of Vaughan after completing an employment lands study and Secondary Plan study. The Official Plan Amendment #637 included a Secondary Plan for the employment area. The Official Plan Amendment OPA #52 has been approved by the Region of York. The Ministry of Municipal Affairs and Housing appealed that decision to the Ontario Municipal Board and resolved the appeal through policy modifications to the OPA requiring planning for a corridor and interchange as part of the next stage of planning (Secondary Plans) for this area. The City of Vaughan has also included the lands outside the Greenbelt in this area as part of the Community (urban) designation Official Plan update approved by the City in September 2010.



*The sources of information shown on graphics in this section are detailed on **Exhibit 4-1**.*

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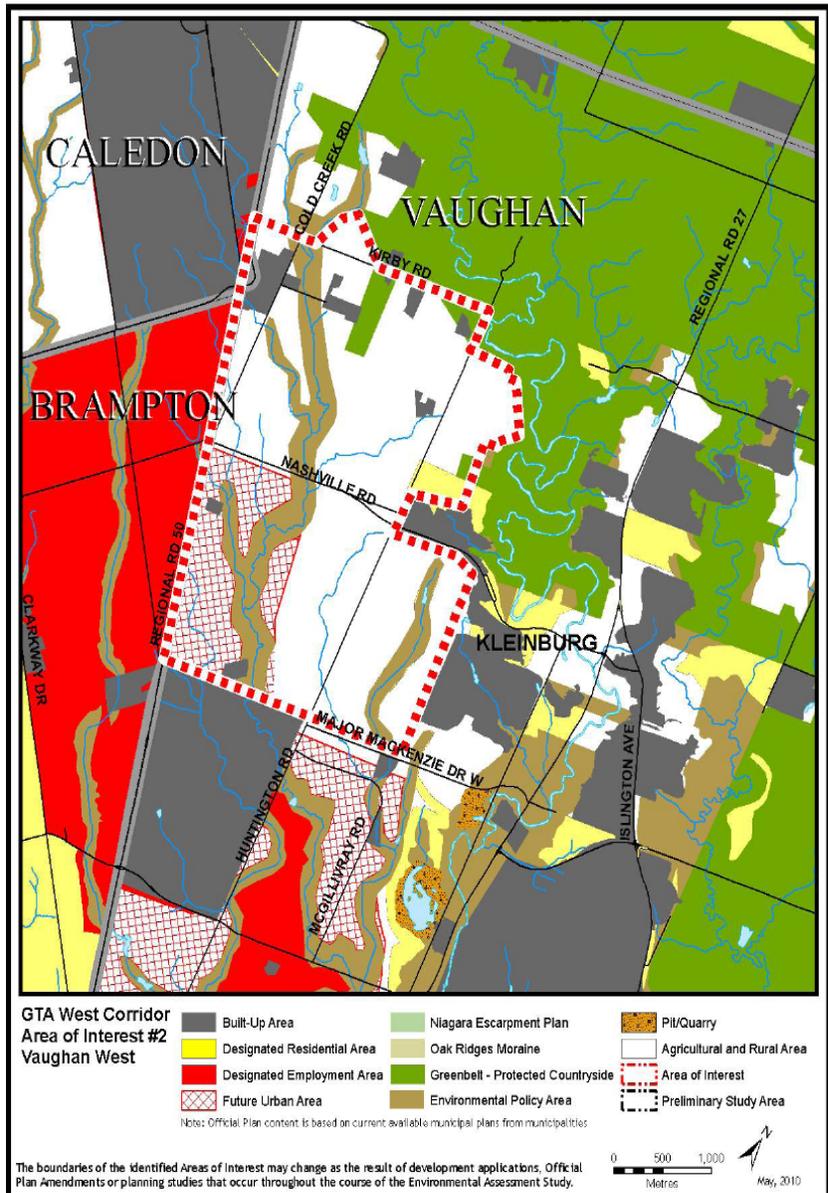
Area #2 – West of Kleinburg

**Location:** Area #2 is located inside and outside the current Official Plan designated urban boundary in Vaughan.

The urban area is located east of Regional Road 50, north of Regional Road 7, to the west of the Kleinburg urban area, south of Rutherford Road. The urban area includes the CP Intermodal Terminal north of Rutherford Road. The Employment Secondary Plan Study Area is north of Langstaff Road, south of Nashville Road, west of Kleinburg and east of Regional Road 50.

**Plan Type:** York Region's Official Plan designates land west of Kleinburg as urban. Some of this land, south of Langstaff Road, is designated for employment uses in the Vaughan Official Plan Amendment #450. York Region's Official Plan designates the land north of Langstaff Road and west of Kleinburg as an Employment Secondary Plan Study Area. Some land to the west of Kleinburg is designated Rural and is outside the urban boundary.

**Plan Status:** The City of Vaughan adopted an new Official Plan on September 10, 2010 this plan designates all of the lands east of Huntington Rd and north of Major MacKenzie Drive as part of the Community (urban) area. A Secondary Plan for that area has also been adopted by Council.



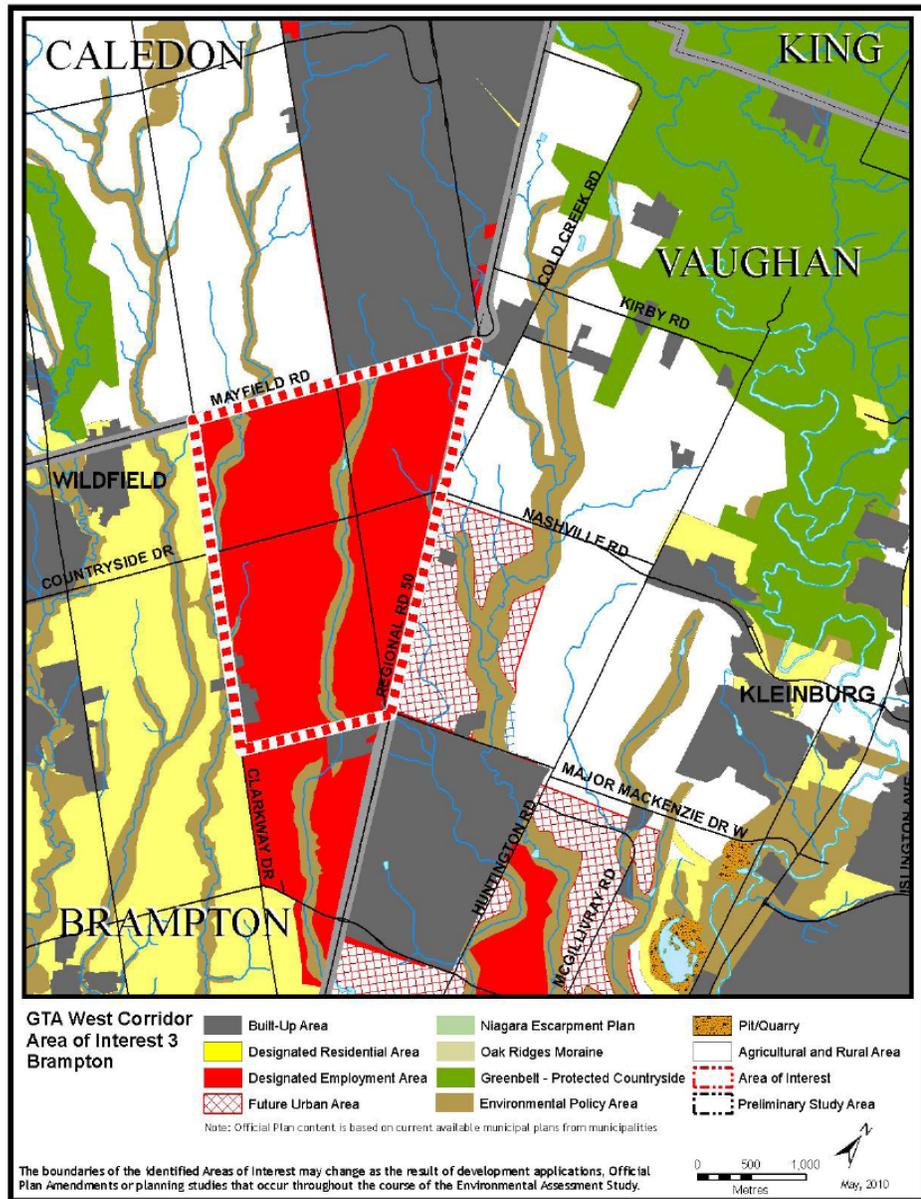
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Area #3 – Brampton – Caledon (Bolton) Interface

**Location:** The North-East Brampton Secondary Plan Area is bounded by Mayfield Road to the north, The Gore Road to the west, Castlemore Road to the south and Highway 50 to the east. This area is inside the current Official Plan designated urban boundary and, outside of environmental corridors, is anticipated to be fully developed for urban uses.

**Plan Type:** North-East Brampton Secondary Plan (Employment area).

**Plan Status:** Brampton is moving to complete the current Secondary Plan for Area 47. Block plans are being prepared concurrently with development and are expected as soon as 2012. MTO has been invited to participate in the Secondary Plan process.

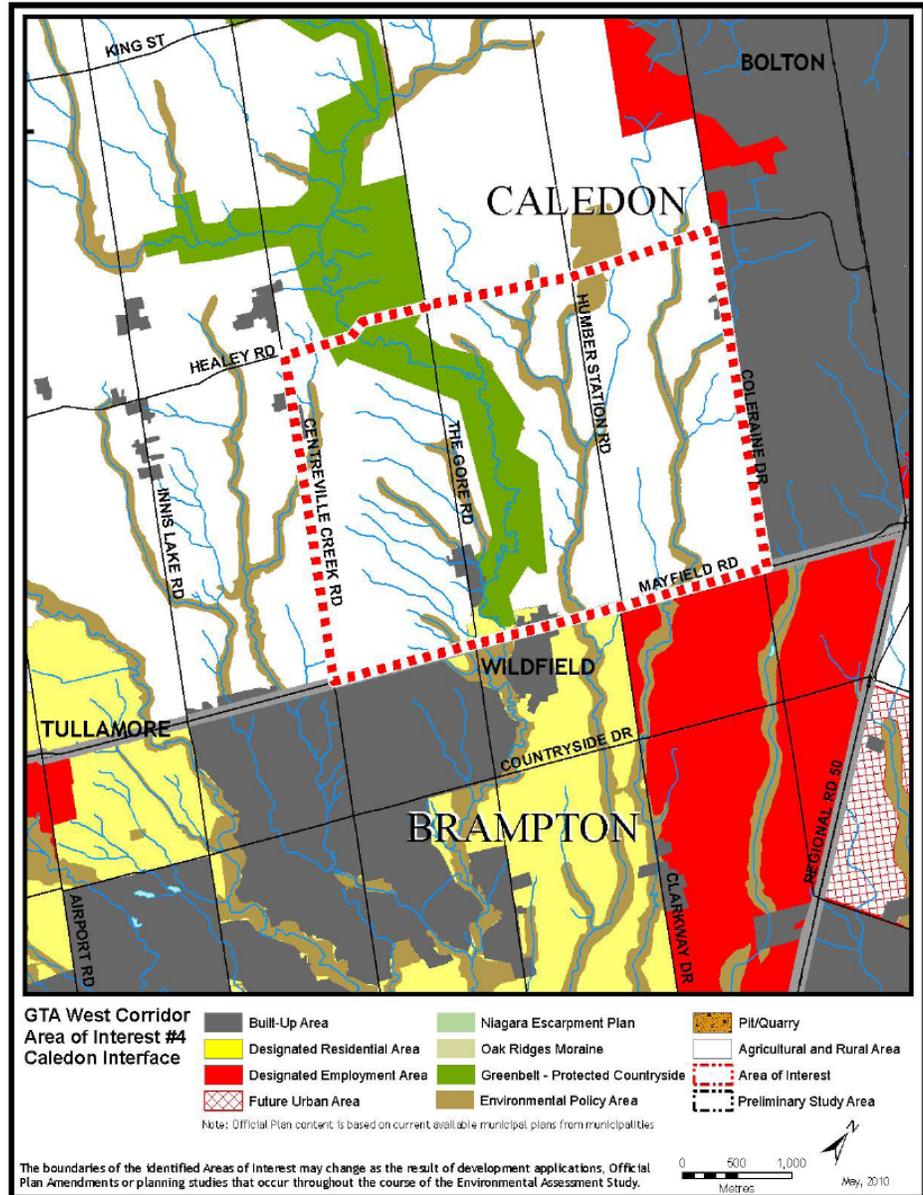


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Area #4 – West of Current Bolton Urban Area

**Location:** Area #4 is located north of Mayfield Road and west of the current Bolton Settlement Area, outside the current Official Plan designated settlement area boundary.

**Plan Type:** A portion of Area #4 along the west side of Coleraine Drive is subject to a study by the Town of Caledon which is proposing a settlement boundary expansion to accommodate the need for employment land. A portion of Area #4 east of Humber Station Road has been endorsed by Council as an urban expansion area for Bolton. These lands encompass approximately half of the concession block between Coleraine Drive and Humber Station Road. The Town is currently preparing development plans for this area. A private application has been submitted to the Region of Peel and the Town of Caledon proposing a residential / commercial / industrial development in the area between Coleraine Drive and The Gore Road.



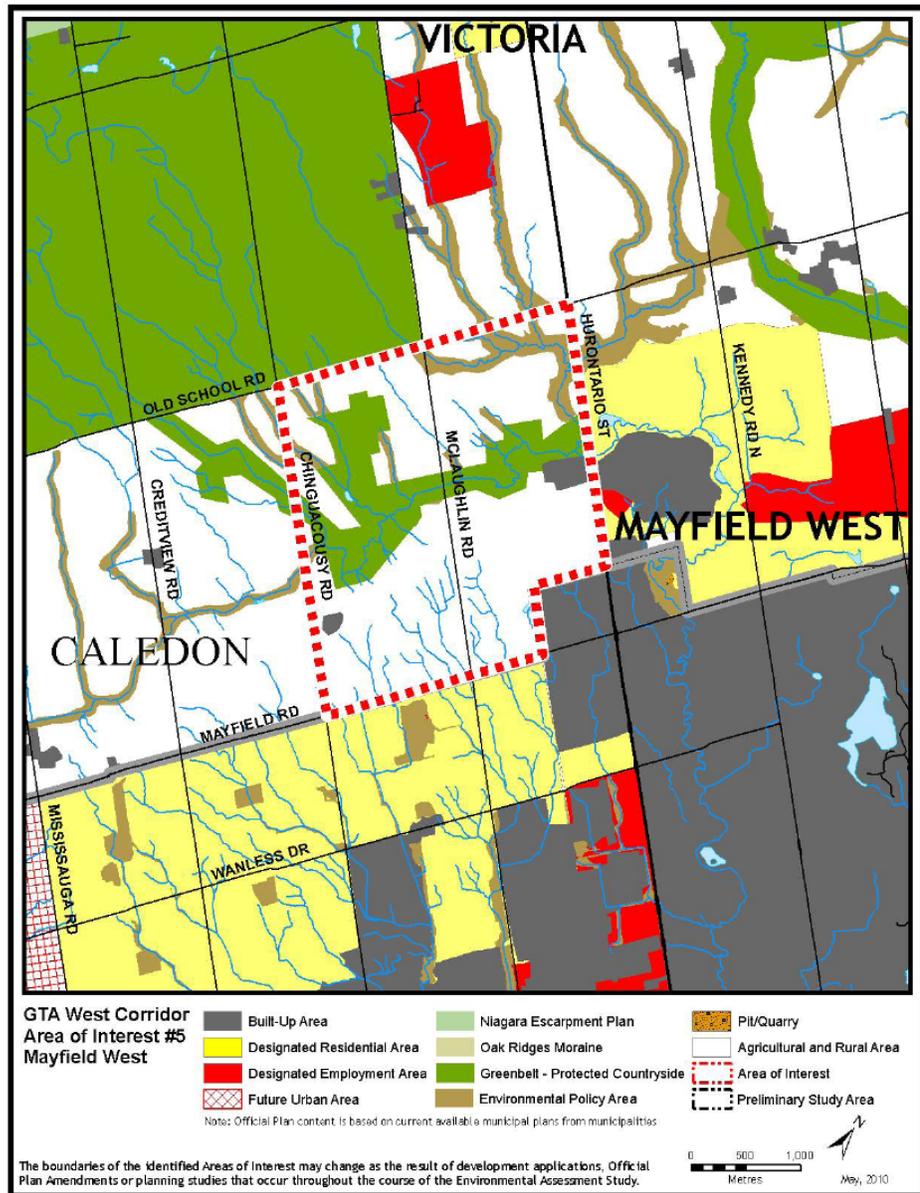
**Plan Status:** Secondary Plan is being prepared.

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Area # 5 - Mayfield West Secondary Plan Area - Town of Caledon

Location: South of Old School Road and east of Chinguacousy Blvd, south to Mayfield Road to Hurontario Street (Highway 10).

Plan Type: The lands are within the Mayfield Settlement Area as defined by the Town of Caledon and Region of Peel Official Plans but remain designated and zoned as Agricultural at this time. In June 2008 the Town of Caledon initiated a Secondary Planning Study on those lands. The study is intended to determine an appropriate development plan to accommodate an additional 3,900 people in the Mayfield West area.



Plan Status: Public sessions have been held wherein the options for urbanization of the area has been reviewed. The Town is moving toward finalizing the Secondary Plan for adoption by Council early in 2011.

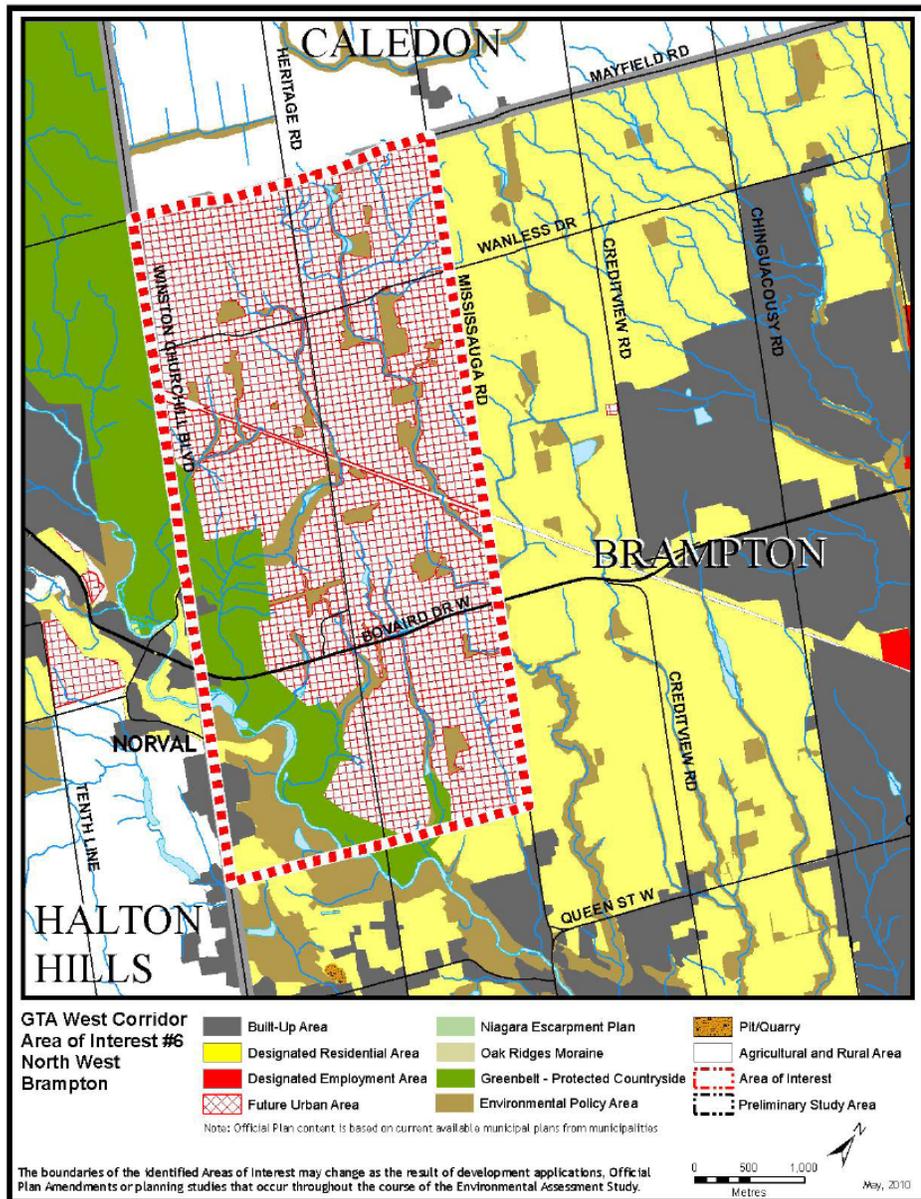
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Area #6 - North-West Brampton

**Location:** The North-West Brampton development area is bounded by Mississauga Road to the east, Mayfield Road to the north, Winston Churchill Boulevard to the west and slightly north of Embleton Road at the south end.

**Plan Type:** This area was approved as an Urban Area by the Ontario Municipal Board in December 2006. The City of Brampton Official Plan and the Region of Peel Official Plan require secondary plans to be prepared as part of the development process.

**Plan Status:** Secondary Plans are currently being prepared in this area to plan for urbanization north to Mayfield Road. Since the initiation of this study, Secondary Plans have been completed and approved for lands east of Mississauga Road and south of Mayfield Road.



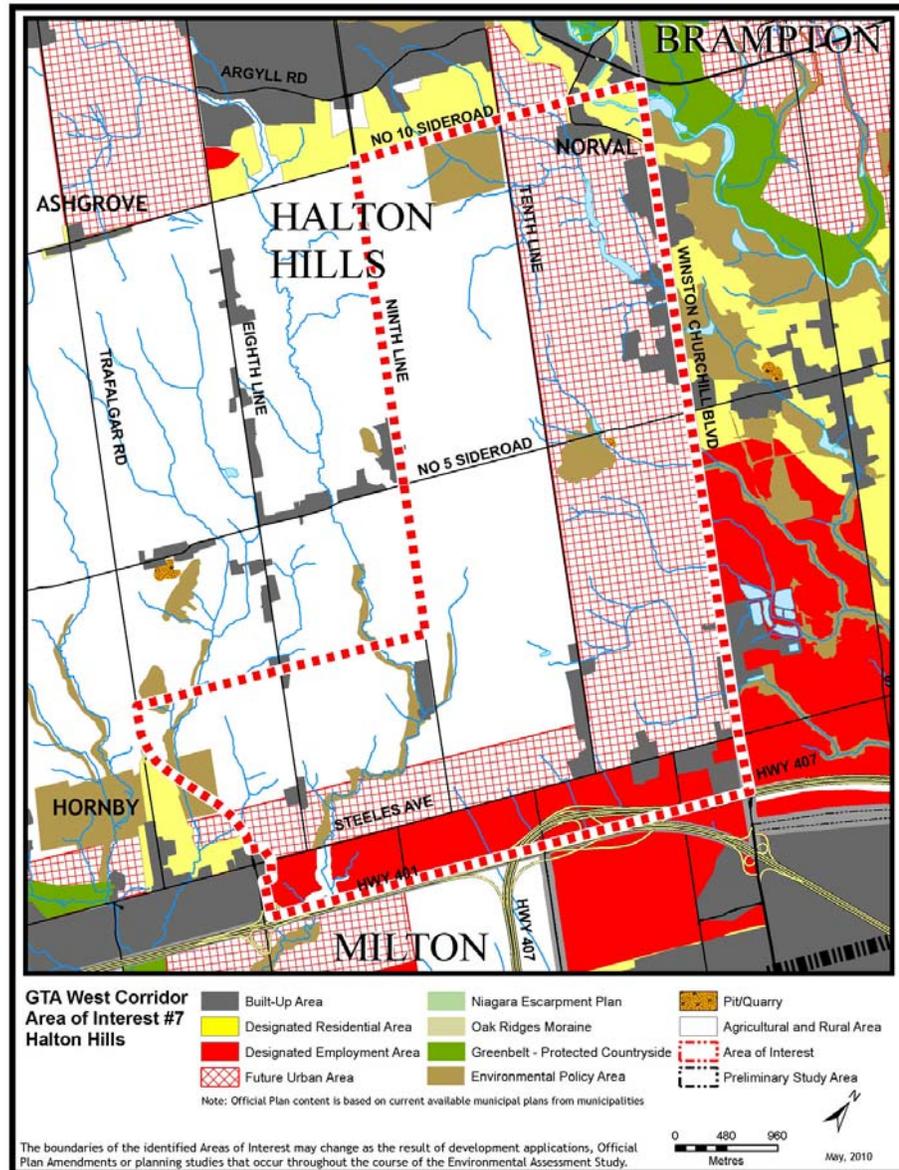
Identification of these lands as an Area of Interest also recognizes the efforts presently underway by the Region of Halton and Region of Peel to identify a north-south transportation corridor through the Halton-Peel Boundary Area Transportation Study (H-P BATS). The City of Brampton has endorsed the recommendations of the H-P BATS Study and steps are being taken to move forward with the route planning stage of the Study.

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Area #7 - West of Winston Churchill Boulevard South - Town of Halton Hills

**Location:** These lands are adjacent to Area of Interest # 6. These lands are of interest due to their location south of the Georgetown Urban Area and the Niagara Escarpment. This Area of Interest extends from No. 10 Sideroad at the top and east to Winston-Churchill Boulevard, south to Highway 401 and along the eastern edge of the Hornby Community and westerly to the Ninth Line.

**Plan Type:** Lands south of Georgetown remain in an agricultural designation at the present time. Lands north of Highway 401 are designated as employment lands. The Regional Official Plan Amendment #38 designates new employment lands north of Steeles Avenue.



**Plan Status:** ROPA #38 is not approved by the Province at this time. Once approved, the Town of Halton Hills will likely initiate secondary planning on these lands.

The Region of Halton has also recently endorsed the recommendations of the H-P BATS study that identifies a ‘super arterial’ transportation corridor through this area.

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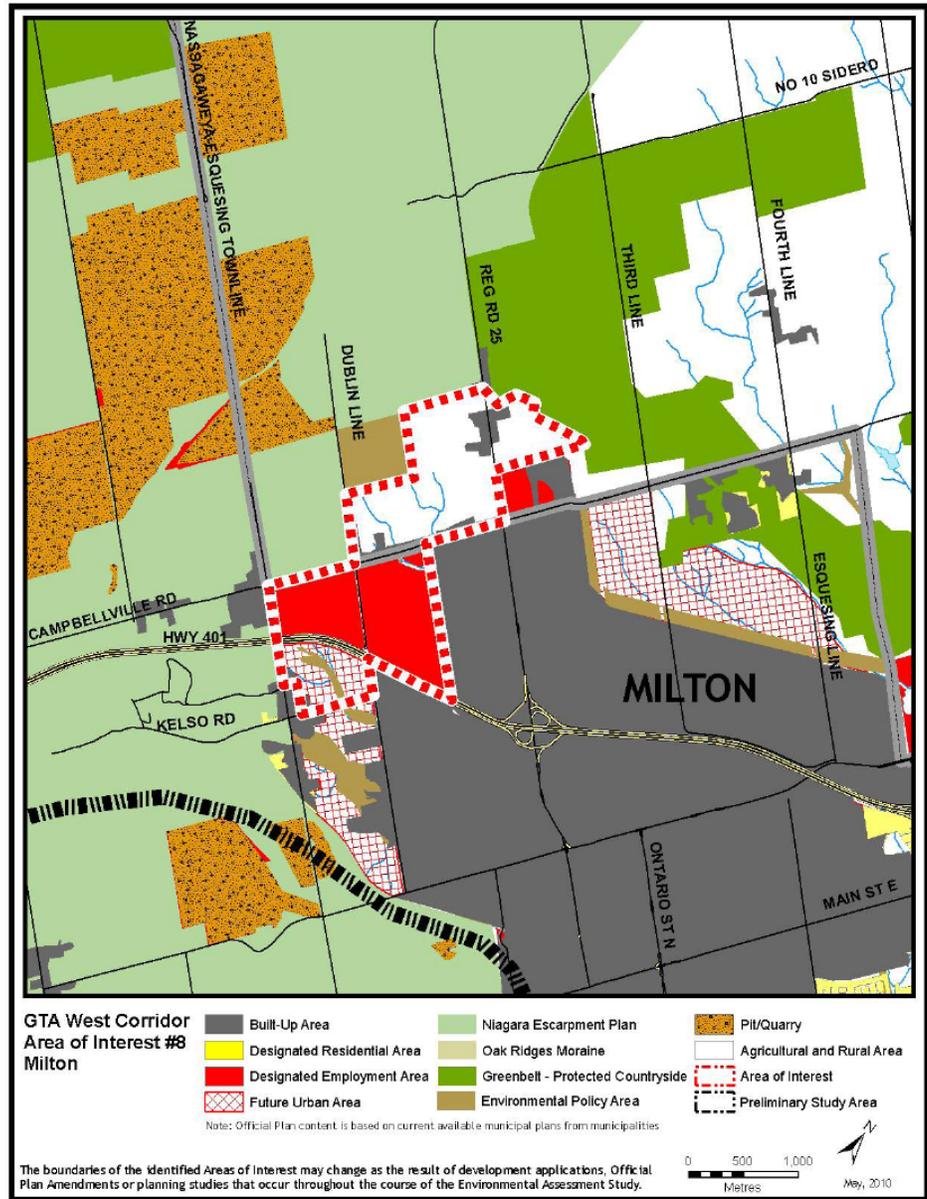
Area #8 - North-West Milton

**Location:** This area is located at the northerly limit of the Milton Urban Area and the southerly limit of Halton Hills along the periphery of the Niagara Escarpment.

**Plan Type:** The area is designated as Employment Lands in the approved Town of Milton Official Plan.

**Plan Status:** The lands in Halton Hills remain designated as Agricultural at this time.

The area in Milton is primarily designated as Employment Lands but is largely vacant. There is currently a detailed tertiary plan being developed for lands south of Highway 401. Lands north of Highway 401 are in the process of completing subdivision approval. The westerly most portions of the lands have not been subdivided at this time. However, pre-consultation on future subdivisions of the lands with the Town has taken place.



**Additional Notes:** This is the most westerly point of the Study Area that would avoid the Niagara Escarpment and Greenbelt.

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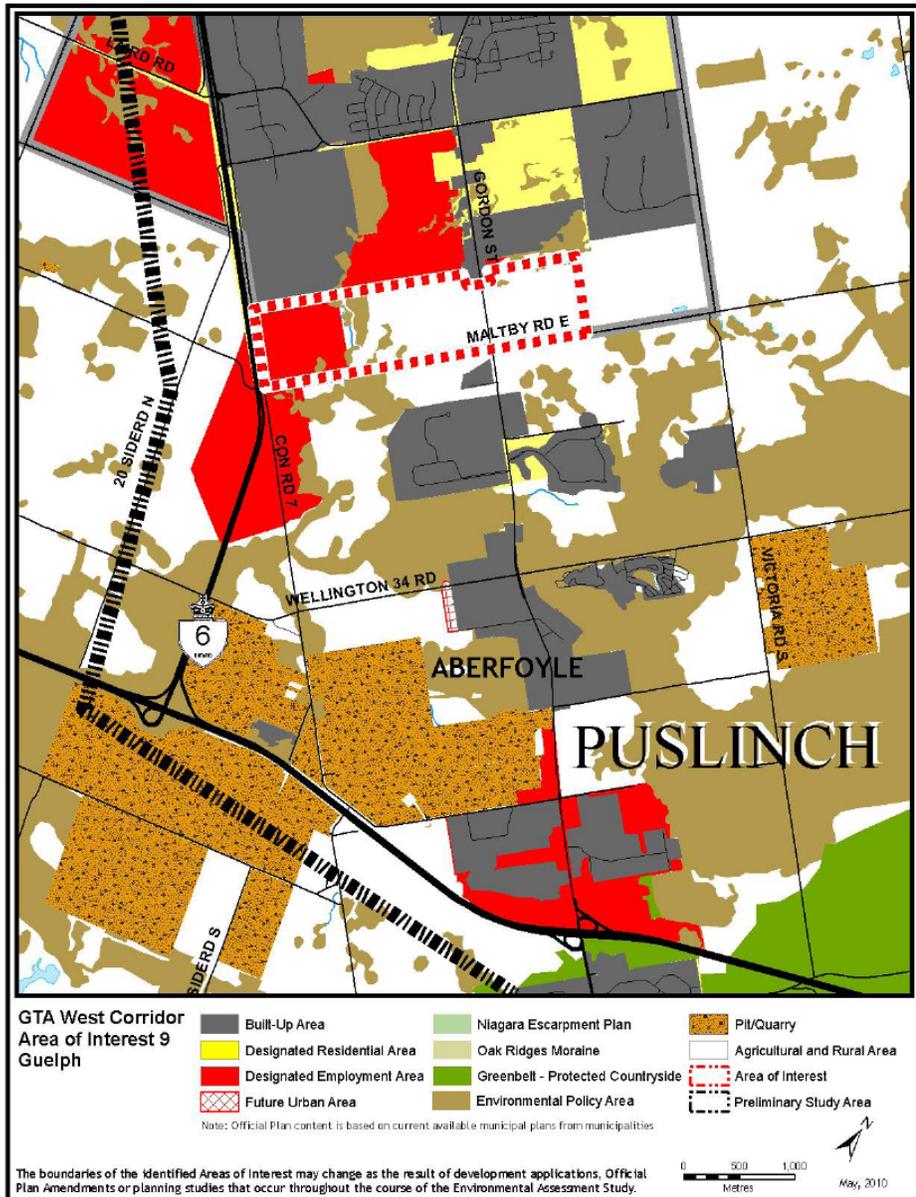
Area #9 - City of Guelph – Southerly Limit at Hanlon Expressway (Highway 6)

Location of lands:

These lands are situated at the southerly limit of the City of Guelph abutting the Guelph/Puslinch border. The area extends to the east of Highway 6 (Hanlon Expressway) through lands that are currently vacant but designated as Employment Lands.

Plan Type: The lands are subject to the City of Guelph Official Plan and are not designated for development at this time.

Plan Status: The City's Official Plan proposes to designate this area as a Greenfield Development Area. The designation would defer development of the area until Secondary Plans for the area have been completed.



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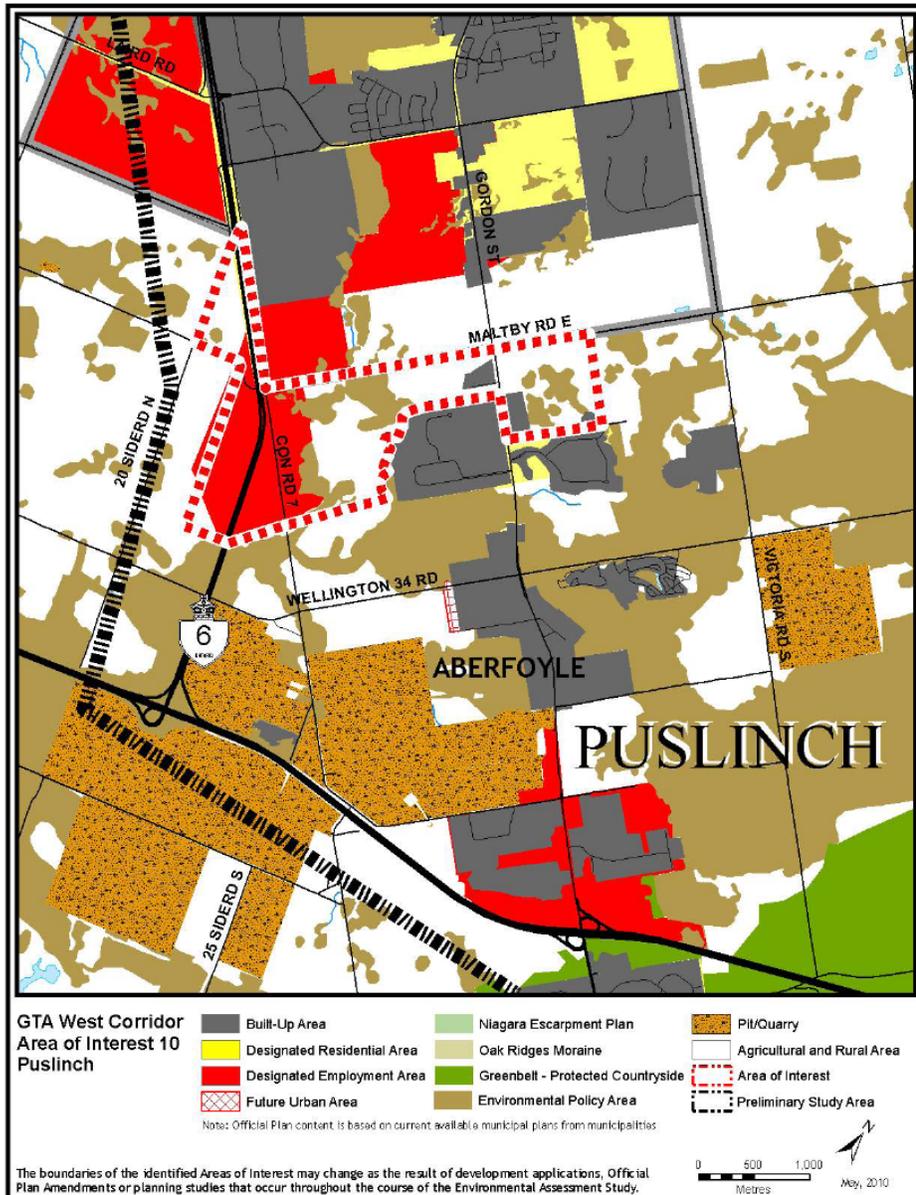
Area #10 - North of Aberfoyle to Guelph Boundary and Hanlon Expressway (Highway 6) - Township of Puslinch

Location of Lands:

The lands are located at the north side of the community of Aberfoyle to the Guelph/Puslinch border.

Plan Type: The lands are subject to the Wellington County Official Plan and are not located in a settlement area. The lands abut residential development to the south and contain some lands that are designated for Employment purposes abutting Highway 6.

Plan Status: No changes to the current Official Plan designations are being considered at this time.



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4.2 Land Use/Community

4.2.1 First Nations Reserves

There are no First Nations Reserves found within the Preliminary Study Area. However two First Nations, the Mississaugas of the New Credit and the Six Nations of the Grand River, have an interest in the local land use within the Preliminary Study Area. This involves protecting the natural environment to protect the longevity of the lands and their traditional land use practices.

4.2.2 First Nations Sacred Grounds

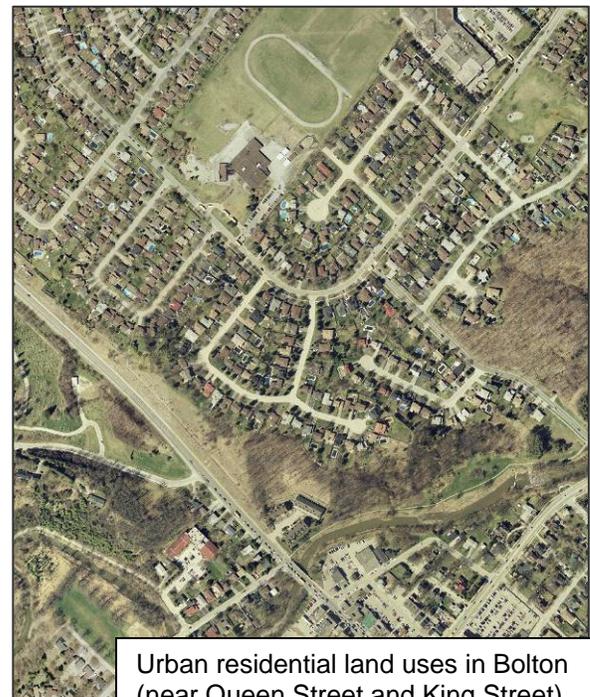
Although the reserves of the Mississaugas of the New Credit and the Six Nations of the Grand River are located south and west of the Preliminary Study Area, there are potential First Nations sacred grounds within Preliminary Study Area. Ongoing discussions with the Mississaugas of the New Credit and the Six Nations of the Grand River will occur throughout the study.

4.2.3 Urban and Rural Residential

Urban areas and small communities are located throughout the Preliminary Study Area. Clusters of residential areas include the south section of Halton Region, Milton, Georgetown, Acton, Guelph, Brampton, Caledon, and the south parts of York Region, primarily in the City of Vaughan. Many of these communities, such as the City of Vaughan, are growing very quickly.

There are also many rural residential areas throughout the Study Area that are not identified as hamlets, communities or residential clusters in upper tier or lower tier Official Plans. These areas will need to be examined in more detail as this study progresses.

Urban areas include lands that are currently developed with residential, commercial, and institutional uses, as well as areas that are planned for future development.



Urban residential land uses in Bolton (near Queen Street and King Street) (Source – MNR 2005)

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4.2.4 Commercial/Industrial

Commercial and industrial land uses exist to some degree in all but the smallest of the settlement areas. Major commercial and industrial operations are generally located in the larger municipalities including Milton, Guelph, Town of Halton Hills (including Acton, Georgetown, and 401/407 Employment Area), Brampton, Caledon, Vaughan, and King.

Retail stores, personal service stores, and restaurants are examples of commercial uses. Manufacturing, warehousing, processing, and assembly facilities are examples of industrial uses.

There is a major intermodal transportation terminal located between Rutherford Road and Major Mackenzie, Huntington Road and Highway 50 in the Preliminary Study Area. This site is important to commercial and industrial land uses as well as transportation services in and beyond the Preliminary Study Area.



Commercial/Industrial land uses in Brampton at Highways 407 and 410  
(Source – MNR 2005)

4.2.5 Tourist Areas and Attractions

The Preliminary Study Area has many major tourist areas including the Niagara Escarpment, and many small communities such as Terra Cotta, Erin, and Kleinburg. Tourism activities include increasingly popular agri-tourism operations and enjoyment of the natural areas of the Niagara Escarpment and the many Conservation Areas. These types of tourism activities are spread throughout the Preliminary Study Area and will need to be examined in more detail as the study progresses.

4.2.6 Community Facilities/Institutions

Community facilities are located in all urban areas and many of the small settlement areas within the Preliminary Study Area. The type and scale of community facilities varies widely within the Preliminary Study Area. Community facilities range from local community centres, churches, and schools to theatres and post secondary institutions.

The types of public transit available to the public vary widely within the Preliminary Study Area. For example, Vaughan has intra-municipal and inter-municipal transit via bus and rail routes whereas the hamlets of Terra Cotta and Huttonville have no public transit. Community facilities will need to be examined in more detail as the study progresses.

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### 4.3 NOISE SENSITIVE AREAS

The main types of Noise Sensitive Areas in the Preliminary Study Area are residential land uses associated with existing built-up communities as described in previous sections of this report.

Noise sources within the Preliminary Study Area vary considerably from point sources associated with commercial and industrial land uses to linear sources associated with transportation infrastructure. Noise levels from transportation infrastructure, such as highways and railways, fluctuate depending on local topography, seasonal traffic volumes, percentage of truck traffic and distance to the receptor.

A preliminary review of transportation noise based on a qualitative assessment at a broad planning level will be undertaken given the significant spatial coverage of the Preliminary Study Area and the potential range of alternative improvements. The alternatives will be reviewed from the perspective of minimizing the number of receptors (Noise Sensitive Areas or communities) that are affected by the alternative(s).

### 4.4 EXISTING AIR QUALITY CONDITIONS IN THE GTA WEST STUDY AREA

The current air quality in the GTA West Preliminary Study Area can be generally characterized with air quality monitoring data from Ontario Ministry of Environment (MOE) and Environment Canada (EC) monitoring stations. The air quality monitoring stations within the GTA West Corridor Preliminary Study Area are located in Guelph (Exhibition Street and Clark Street) and Brampton (525 Main Street North). Other applicable stations in the vicinity of the Preliminary Study Area include Kitchener (West Avenue and Homewood Avenue) and Toronto West (125 Resources Road). The contaminants summarized from these stations include carbon monoxide (CO), nitrogen dioxide (NO<sub>2</sub>), respirable particulate matter (PM<sub>2.5</sub>), benzene, and 1,3-Butadiene. Data for inhalable particulate matter (PM<sub>10</sub>), formaldehyde, acetaldehyde, and acrolein were not available from published reports. The contaminants shown were selected because they are directly associated with transportation emissions and are those that will be studied in the dispersion modelling at a later stage in the EA process.

**Exhibits 4-2, 4-3, 4-4** provide the mean, 90<sup>th</sup> percentile, and maximum values of measured concentrations from the monitoring stations listed above. The data are extracted from the MOE (2005) *Air Quality in Ontario – 2005 Report* and represent conditions over the year 2005. A few records are also derived from EC (2004) *National Air Pollution Surveillance Network Annual Data Summary for 2004* report to supplement the missing data in the MOE (2005) report. The mean values are more representative of typical conditions, 90<sup>th</sup> percentile values (value of concentration which is exceeded only 10% of the time) are more representative of credible worst-case conditions, and maximum values are more representative of rare peak events.

The mean and 90<sup>th</sup> percentile values in **Exhibits 4-2 and 4-3** meet the Ambient Air Quality Criteria (AAQC) (listed in **Exhibit 4-5**). As expected, the maximum values in **Exhibit 4-4** for PM<sub>2.5</sub> exceed the AAQC and the maximum values for the other contaminants meet the AAQC's.

**Exhibit 4-3** includes a summary of the concentrations of the two measured transportation related air toxic chemical species benzene and 1, 3-butadiene, which belong to the broader group called Volatile Organic Compounds (VOCs). Since VOCs are difficult to measure, there are only a few monitoring stations in Ontario that regularly measure the ambient concentrations

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of these contaminants. The data for these compounds are derived from the *National Air Pollution Surveillance Network Annual Data Summary for 2004* report. Acrolein and acetaldehyde are two other transportation related VOC compounds of interest but were not available in the Preliminary Study Area.

Transportation is not the only cause of regional air pollution. For example, in the case of PM<sub>2.5</sub>, elevated levels are commonly related to regional photochemical processes. According to the MOE (2005) *Air Quality in Ontario – 2005 Report*, EC (2004) *Transboundary Air Quality in Ontario – 2005 Report*, and previous studies done by EC and by RWDI, transboundary air pollution (mainly from United States) is one of the largest contributions to Ontario’s smog events in the summer. Lake breeze convergence (from Lake Huron and Lake Erie) building up from London, Kitchener, through Guelph, and the Brampton areas in the summer, can also cause an increase in PM<sub>2.5</sub> levels under southwesterly wind conditions in the Preliminary Study Area. Therefore, the data shown in **Exhibits 4-2, 4-3, 4-4** are a combination of local and transboundary effects.

**Exhibit 4-2: Mean Value of Concentrations of Transportation Related Contaminants for 2005**

Contaminant	Averaging Period	Units	MOE Station			
			Guelph (#28028)	Brampton (#46089)	Kitchener (#26060)	Toronto West (#35125)
CO	1-hour	ppm	N/A	0.5 <sup>[2]</sup>	0.56 <sup>[1]</sup>	0.38
NO <sub>2</sub>	1-hour	ppb	N/A	16.9	12.9	26.6
PM <sub>2.5</sub>	1-hour	µg/m <sup>3</sup>	8.8	8.8	9.5	10.0

**Exhibit 4-3: 90<sup>th</sup> Percentile of Concentrations of Transportation Related Contaminants for 2005**

Contaminant	Averaging Period	Units	MOE Station			
			Guelph (#28028)	Brampton (#46089)	Kitchener (#26060)	Toronto West (#35125)
CO	1-hour	ppm	N/A	0.9 <sup>[2]</sup>	0.82 <sup>[1]</sup>	0.63
NO <sub>2</sub>	1-hour	ppb	N/A	36	27	45
PM <sub>2.5</sub>	1-hour	µg/m <sup>3</sup>	22	22	24	24
Benzene <sup>[2]</sup>	24-hour	µg/m <sup>3</sup>	N/A	1.5	1.4	1.8
1,3-Butadiene <sup>[2]</sup>	24-hour	µg/m <sup>3</sup>	N/A	0.2	0.1	0.2

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Exhibit 4-4: Maximum Value of Concentrations of Transportation Related Contaminants for 2005

Contaminant	Averaging Period	Units	MOE Station			
			Guelph (#28028)	Brampton (#46089)	Kitchener (#26060)	Toronto West (#35125)
CO	1-hour	ppm	N/A	3.4 <sup>[2]</sup>	3.94 <sup>[1]</sup>	2.65
	8-hour	ppm	N/A	2.1 <sup>[2]</sup>	2.66	1.66
NO <sub>2</sub>	1-hour	ppb	N/A	89	68	88
	24-hour	ppb	N/A	54	50	65
PM <sub>2.5</sub>	1-hour	µg/m <sup>3</sup>	66	59	73	68
	24-hour	µg/m <sup>3</sup>	46	48	48	49

Exhibit 4-5: Ambient Air Quality Criteria (AAQC)

Contaminant	Averaging Period	Current AAQC
CO	1 hour	30 ppm
	8 hour	13 ppm
NO <sub>2</sub>	1 hour	200 ppb
	24 hour	100 ppb
PM <sub>10</sub>	24 hours	50 µg/m <sup>3</sup>
PM <sub>2.5</sub> <sup>[3]</sup>	24 hours	30 µg/m <sup>3</sup>
Benzene	N/A	N/A
1,3-Butadiene	N/A	N/A
Formaldehyde	24 hours	65 µg/m <sup>3</sup>
Acetaldehyde	24 hours	500 µg/m <sup>3</sup>
Acrolein	N/A	N/A

**Notes:** [1] The Kitchener monitoring station stopped monitoring CO in Year 2004, therefore Year 2003 CO concentrations from Kitchener are presented in the table.

[2] Concentrations derived from NAPS 2004 Annual Report.

[3] Canada Wide Standard for PM<sub>2.5</sub> established for the year 2010 based on the 98<sup>th</sup> percentile ambient measurement annually averaged over three consecutive years.

ppm, ppb, and (µg/m<sup>3</sup>) stand for parts per million, parts per billion, and microgram per cubic metre, respectively. N/A stands for “not available”.

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## 4.5 LAND USE/RESOURCES

The Preliminary Study Area is comprised of a mix of land uses within the Regional Municipality of York, the Region of Peel, Halton Region, the County of Wellington and the City of Guelph. Some specialty crops and cropland occur between the Niagara Escarpment and Lake Ontario, with additional market gardening associated with small pockets of organic soils. Quality agricultural lands extend from above the Escarpment lip westward toward the City of Guelph. These lands include cash crop operations, beef/dairy operations, poultry, and mixed farming operations. Agriculture is a dominant land use within this part of the Preliminary Study Area.

### 4.5.1 Agriculture Policy

The long-term protection of quality agricultural lands is a priority of the Province and has been addressed in the PPS. Municipal Governments have similar regard for the protection and preservation of agricultural lands, and address their specific concerns within their respective Official Plans. With this in mind, the PPS, York Region Official Plan (Sept 1, 2007), the Region of Peel Official Plan – Office Consolidation (2005), the Halton Regional Official Plan (2006), and Wellington County Official Plan (Oct 6, 2006) were reviewed.

Further reviews were completed for the Greenbelt Plan (*Greenbelt Act*, 2005) and the *Halton Region Environmental Impact Assessment Guidelines* (July 13, 2005) and the *Halton Region Agricultural Impact Assessment Guidelines* (October 1985), Region of Peel Amendment 179.

The Official Plan Policies, *Greenbelt Plan* and *Halton Region Environmental Impact Assessment Guidelines* were reviewed to verify if there were additional or specific agricultural components to be investigated when determining the potential impacts to agriculture.

The relevant Provincial, Regional and County policies are described in the following sections.

### 4.5.2 Provincial Agricultural Policy

The PPS was enacted to document the Provincial Government's development and land use planning strategies. The PPS provides the policy foundation for regulating development and land use and provides comment regarding regulations for Natural Heritage, Water, Agriculture, Minerals and Petroleum, Mineral Aggregate Resources, and Cultural Heritage and Archaeology.

Agricultural policies are addressed within Section 2.3 of the PPS. Section 2.3.1 states that "Prime Agricultural Areas shall be protected for long-term use for agriculture". Prime Agricultural Areas were defined as "Specialty Crop Areas" and Classes 1-3 lands with the order of preservation being Specialty Crop Areas, Classes 1, 2 and 3 in that order respectively. The PPS also states (in Sections 2.3.5 and 1.1.3.9) that planning authorities can exclude land from Prime Agricultural Areas for the expansion of settlement areas, at the time of a comprehensive review (i.e., in accordance with growth policies).

Impacts from any new non-agricultural uses on surrounding agricultural operations and lands will be mitigated.

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#### 4.5.3 Official Plan Policy

Official Plan policies are prepared under the *Planning Act*, as amended by the Province. Official Plans generally provide policy comment for land use planning while taking into consideration the economic, social and environmental impacts of land use and development concerns. For the purpose of this report the Official Plans of York Region, Peel Region, Halton Region, the County of Wellington, the Town of Halton Hills and the City of Guelph were reviewed for issues related to agriculture.

##### *Region of York*

The Region of York Agricultural Policy Areas consist primarily of the Canada Land Inventory (CLI) soil classifications 1-4 and organic soils areas used for market gardening. It is recognized within this Official Plan that some “existing farmland will be required to accommodate growth” and that it is “important to protect the remaining farmland in the rural portions of the Region.”

York Region agricultural objectives were identified as supporting a healthy and viable agricultural industry and ensuring that uses that conflict with agriculture are not established in productive farming areas.

Specific to this study, Policy 9a states “that consents may be permitted in accordance with the policies in Section 5.12 of this Plan for the following purposes...to create rights-of-way or easements.”

##### *Region of Peel*

The Region of Peel Official Plan (Office Consolidation November 2005) was created as a long-term plan for guiding growth and development while having regard for protecting the environment. With respect to this study, Schedule B was reviewed to determine the appropriate designation for the Subject Lands. Schedule B illustrated that the Subject Lands are located in an area classified as Prime Agricultural Land. Agricultural Policies are presented in Section 3.2.2 of the Official Plan.

The Prime Agricultural Area generally has a CLI Soil Capability for Agriculture (common field crop) rating of Class 1, 2 or 3. In addition, certain lands are used for the production of special crop (market vegetable) or have specialized farm investments. The Official Plan agricultural policies are designed to protect the Prime Agricultural Area for agriculture and to protect agricultural operations in the Prime Agricultural Area. Schedule B of the Official Plan identifies Prime Agricultural Lands in the Town of Caledon. The Official Plan is currently being updated. It is suggested that there will be reference to OPA 179’s vision, goal and objectives for the prime Agricultural Area.

##### *Town of Caledon*

The most recent consolidation of the Town of Caledon Official Plan is dated December 31, 2008. The Agricultural designation generally applies to lands within CLI Classes 1-3 for soil capability, in addition to “*optimal*” Class 4 soils. The Official Plan, in Section 5.1.3.3, encourages the “*maintenance and preservation of the existing character of the agricultural*”

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landscape.” Agricultural uses “shall be accorded priority” in this designation (Section 5.1.3.2). These policies recognize that smaller pockets of land with lower capability for agriculture have been included in the Prime Agricultural Area.

Approvals of non-agricultural uses shall require the impact of such a use on surrounding agricultural activity to be assessed (Section 5.1.3.6). As part of a complete application, Section 6.2.1.6.2(i) identifies Agricultural Impact Assessments as a potential requirement for a planning application. Such a study is to be prepared by a qualified professional. Previous Official Plan policy (Section 5.1.1.17) provided specific direction on the content and nature of an Agricultural Impact Assessment:

- To be prepared by a qualified agricultural expert;
- To describe the proposed development;
- To detail the need for the development;
- To describe on-site and surrounding land uses and agricultural capability;
- To outline the physical and socio-economic components of the agricultural resource base;
- To detail land use compatibility with the surrounding agricultural use;
- To identify the direct and indirect impacts of the proposed development on existing agricultural uses;
- To provide an alternative location analysis; and,
- To identify mitigating measures to reduce any potential adverse impacts to agriculture.

*Region of Halton*

The Regional Official Plan was adopted by Regional Council in March 1994 and approved by the Minister of Municipal Affairs and Housing in November 1995. Between 2001 and 2004, a major review of *The Regional Plan* (1995) was undertaken in accordance with the *Planning Act*. The current Office Consolidation of the Official Plan, referred to as *Halton Regional Official Plan* (2006), incorporates all changes to the Official Plan up to and including August 17, 2006.

Specific to the *Halton Regional Official Plan*, Map1 the Preliminary Study Area comprises a mix of components including: Greenlands A; Greenlands B; ESAs; Escarpment Protection Areas; Escarpment Rural Areas; Mineral Resources Extraction; and the Agricultural Rural Areas.

Section 99 of the Regional Official Plan addresses the issues related to the above listed components. The main objectives of Section 99 (Agricultural Rural Area) include:

- (1) To recognize agriculture as the primary activity and land use in the Agricultural Rural Area;
- (2) To preserve Prime Agricultural Soils;
- (3) To maintain as much as possible lands for existing and future farm use;

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- (4) To protect farms from incompatible activities and land uses which would limit agricultural productivity or efficiency;
- (5) To reduce the fragmentation of lands suitable for agriculture and provide for their consolidation;
- (6) To promote the rental for farming of lands not so used;
- (7) To promote a diverse, innovative and economically strong agricultural industry in Halton by tailoring its products and marketing to meet local and regional needs and demands;
- (8) To promote agriculture-related tourism and direct sales of farm produce and accessory products to visitors and local businesses;
- (9) To preserve the farm community as an important part of Halton's rural fabric;
- (10) To promote environmentally sensitive and sustainable farm practice;
- (11) To retain or increase tree cover for harvest, soil erosion protection, and buffering from adjoining non-farm land uses;
- (12) To encourage a strong farm support service industry in Halton;
- (13) To encourage the participation of the agricultural industry and community in dealing with concerns of an agricultural nature;
- (14) To preserve the open-space character, topography and landscape of the Agricultural Rural Area;
- (15) To ensure that lands and waters can sustain settlement without environmental degradation; and
- (16) To promote rural uses in a manner sensitive to the ecological balance and the farming community.

*Town of Halton Hills*

The most recent consolidation of the Town of Halton Hills Official Plan is dated May 2008. The majority of lands in the Town are subject to the policies of the Niagara Escarpment Plan and Greenbelt Plan. Lands south of Georgetown are designated Agricultural Area. The designation is intended to recognize agriculture and the primary use of land on such lands and to preserve and promote the agricultural and open space character of the area. However, the entire area is subject to three deferrals relating to growth management and the potential need for additional urban lands in Georgetown during the Official Plan timeframe (to 2021).

*Town of Milton*

Lands in Milton above the Niagara Escarpment are subject to the policies of the Greenbelt Plan.

*Overview of Environmental Conditions and Constraint Working Paper December 2010**County of Wellington*

The Greenbelt Plan applies to the headwaters of Bronte Creek in Puslinch Township. The County of Wellington Rural System includes Prime Agricultural Areas and “Secondary Agricultural Areas”. Prime Agricultural Areas include soils of Class 1, 2 and 3 (under CLI) and Specialty Crop Areas. Secondary Agricultural Areas were defined as lands which are determined to be non-prime farmland but which can sustain certain agricultural activities. The majority of rural lands in Guelph-Eramosa Township are designated Prime Agricultural. In, Puslinch Township, the majority of lands south of Guelph are designated Secondary Agricultural, with some Prime Agricultural lands along its border with Guelph-Eramosa and in pockets around the rural area.

*Town of Milton*

Lands in Milton above the Niagara Escarpment are subject to the policies of the Greenbelt Plan.

#### 4.5.4 Specialty Crop Areas

Specialty Crop Areas are identified as zones of unique soil and climate characteristics where a variety of fruit and/or vegetable nursery stock crops are produced that cannot be produced elsewhere. In addition to the production of these unique crops, these areas also comprise the infrastructure for the storage, packaging, and transportation of the crop.

The Regions of York and Peel do not identify unique areas for specialty crop production, however, areas of specialty crops have been observed in the Region in small isolated locations.

Although the Region of Halton Official Plan Map 1 does not identify unique areas for specialty crop production, areas of specialty crop production have been observed. These areas are often isolated from other specialty crop areas and may not contain the associated specialty crop infrastructure.

Wellington County Schedules A2, A3 and A7 do not identify unique areas for specialty crop production; however, areas of specialty crops are found in small isolated locations.

#### 4.5.5 Agricultural Soils and Soil Capability for Agriculture

*Physiography*

The southern Ontario Physiographic Unit Map indicates that the Preliminary Study Area is located within the South Slope, Peel Plain, Niagara Escarpment, Horseshoe Moraines, Flamborough Plain, and the Guelph Drumlin Field physiographic regions. The South Slope Region is described as the southern slope of the Oak Ridges Moraine. The soils in this Region have developed on a variety of soil materials including heavy calcareous glacial till materials, gravels, and sand deposits. The Niagara Escarpment is a land form extending from the Niagara River to the tip of the Bruce Peninsula. This area is described as a steep outcrop of limestone which divides the lower area near Lake Ontario from the heavy clay soils above the Escarpment which generally slopes toward Lake Erie. The Horseshoe Moraines describe an area of open

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soils (sandy materials) with a moderate level of stoniness. The Flamborough Plain is an area north of the City of Hamilton which is described as a limestone plain with plenty of swamps. The Guelph Drumlin Field comprises broad oval shaped drumlins. The till in the area is rather stony with many large surface boulders.

*Climate*

The Preliminary Study Area is located within the 2700 to 3100 average accumulated Crop Heat Units available for warm season crops in Ontario. The Crop Heat Units (CHU) index was originally developed for field corn and has been in use in Ontario for 30-years. The CHU ratings are based on the total accumulated crop heat units for the frost free growing season in each area of the province. CHU averages range between <2100 east of Parry Sound to over 3500 near Windsor. The higher the CHU value, the longer the growing season and greater are the opportunities for growing value crops.

*Canada Land Inventory*

Basic information about the soils of Ontario is made more useful by providing an interpretation of the agricultural capability of the soil for various crops. The CLI system combines attributes of the soil to place the soils into a seven-class system of land use capabilities. The CLI soil capability classification system groups mineral soils according to their potential and limitations for agricultural use. The first three classes are considered capable of sustained production of common field crops, the fourth is marginal for sustained agriculture, the fifth is capable for use of permanent pasture and hay, the sixth for wild pasture and the seventh class is for soils or landforms incapable for use for arable culture or permanent pasture. Organic or Muck soils are not classified under this system.

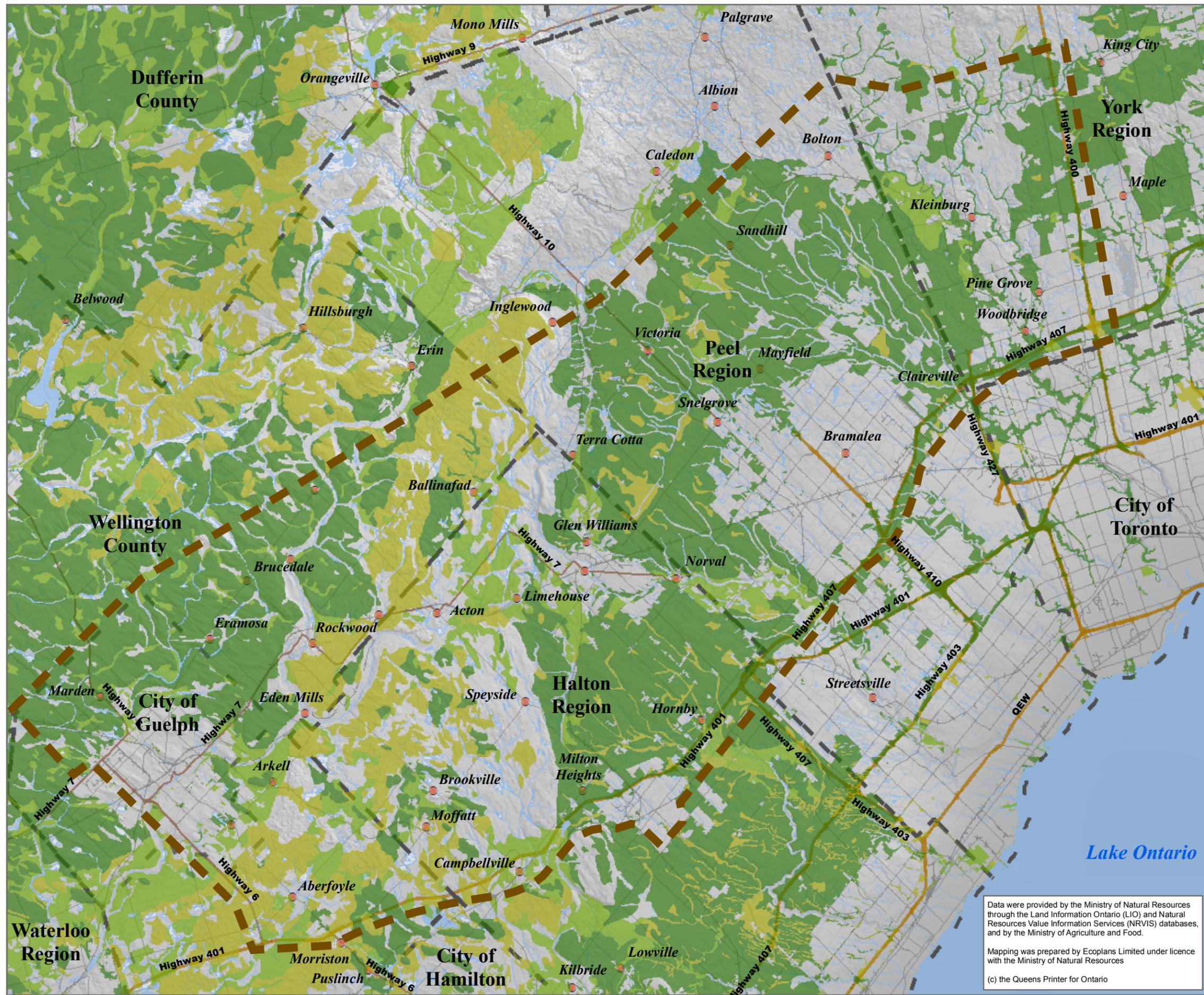
Agricultural soil classifications in the Preliminary Study Area are shown on **Exhibit 4-6**. As identified previously, large portions of the Preliminary Study Area comprise CLI Class 1-3 lands. There are many contiguous areas of Prime Agricultural lands but no one single contiguous unit across the Preliminary Study Area.

*4.5.6 Parks and Recreational/Trails Areas*

Within the Preliminary Study Area there are many parks and recreational areas including several popular trail systems. The Preliminary Study Area is well known for various outdoor activities that take place in these unique environments. The parks, conservation areas, hiking, biking and skiing trails, picnic areas, as well as the many swimming and off road locations are too numerous to list for the entire Preliminary Study Area. A brief description of some of the more popular areas of recreation is listed below: major trails in the Preliminary Study Area are shown on **Exhibit 4-7**.

*The Bruce Trail Conservancy*

In 1960, the idea of a public footpath that would span the entire length of the Niagara Escarpment was born with the first meeting of the Bruce Trail Committee. The Committee along with several Escarpment landowners were key to the success of the trail. By 1963 Regional Clubs were established along the trail with each club responsible for organization, landowner approval, construction, and maintenance. The determination, vision and support of all those involved led to the unveiling of the Bruce Trail in Tobermory, Ontario in 1967. On the 40<sup>th</sup>



**GTA West  
Corridor Planning  
And Environmental  
Assessment  
Study - Stage 1**

**Overview of  
Environmental  
Conditions and  
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Paper**

**Exhibit 4 - 6  
Land Capability  
For Agriculture**

- Legend**
- GTA West Preliminary Study Area
  - Municipal Boundary
  - 400 Series Highways
  - Highways

- Canada Land Inventory Class**
- Class 1 Lands
  - Class 2 Lands
  - Class 3 Lands

Date: May 2010

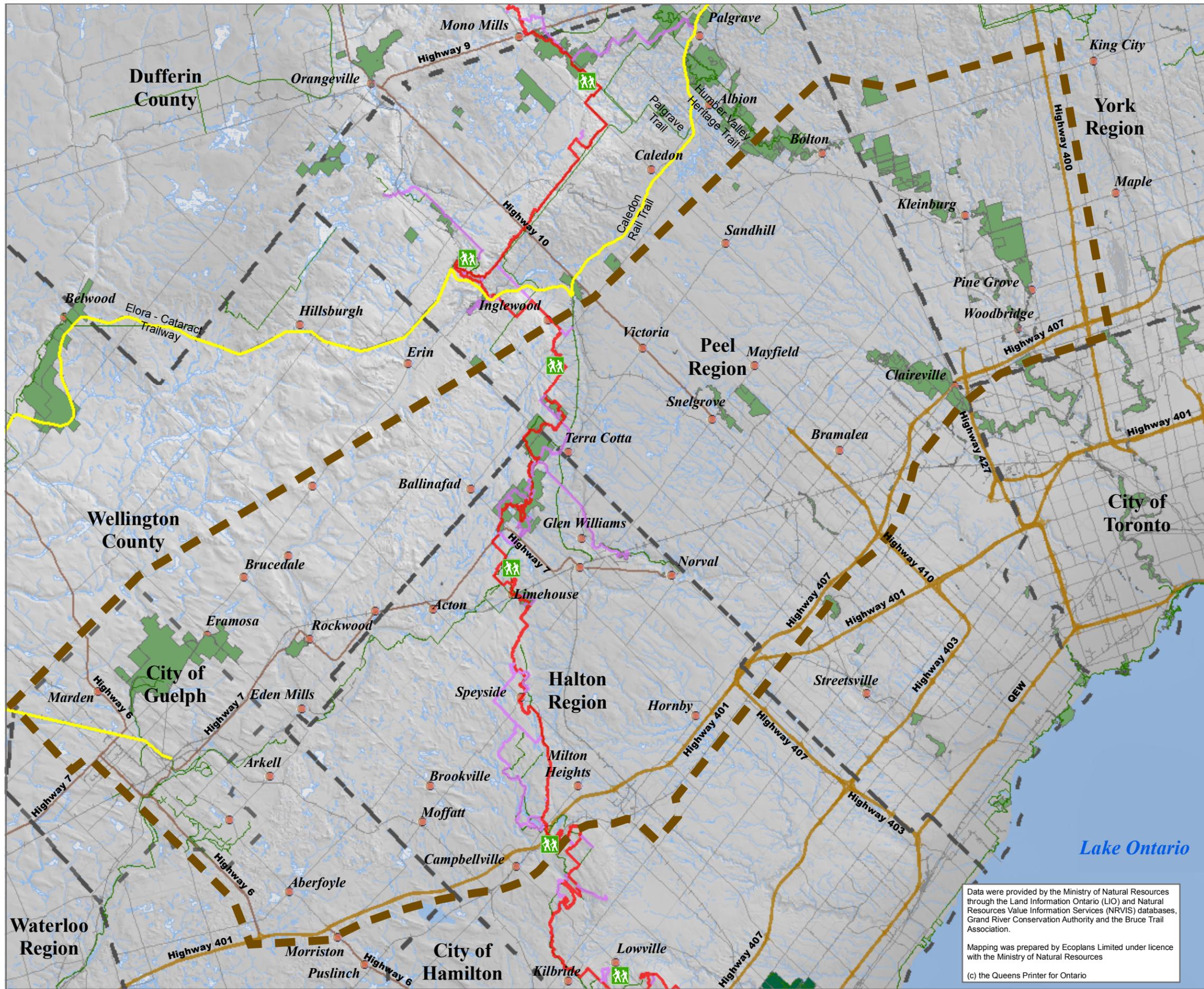
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Data were provided by the Ministry of Natural Resources through the Land Information Ontario (LIO) and Natural Resources Value Information Services (NRVIS) databases, and by the Ministry of Agriculture and Food.

Mapping was prepared by Ecoplans Limited under licence with the Ministry of Natural Resources

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Assessment  
Study - Stage 1**

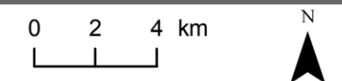
**Overview of  
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Constraints Working  
Paper**

**Exhibit 4 - 7  
Recreation and  
Trail Map**

**Legend**

- GTA West Preliminary Study Area
- Municipal Boundary
- 400 Series Highways
- Highways
- Conservation Area
- Provincial Park
- Bruce Trail - Main Trail
- Bruce Trail - Side Trails
- Trans Canada Trail
- Other Trails

Date: May 2010



Data were provided by the Ministry of Natural Resources through the Land Information Ontario (LIO) and Natural Resources Value Information Services (NRVIS) databases, Grand River Conservation Authority and the Bruce Trail Association.

Mapping was prepared by Ecoplans Limited under licence with the Ministry of Natural Resources

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anniversary of the Bruce Trail Association, the organization was renamed “The Bruce Trail Conservancy”.

The Bruce Trail, Canada’s longest and oldest footpath, provides the only public access to the breath-taking Niagara Escarpment, an UNESCO World Biosphere. The 845 km of main trail and the 430 km of side trails are stocked with beautiful scenery, gentle valleys, towering cliffs, and spectacular waterfalls.

There are numerous side trails in the Preliminary Study Area. Some of the most popular ones are The Forks of the Credit, Devil’s Pulpit, Terra Cotta, Silver Creek, Dufferin Quarry-Hilton, Cheltenham Badlands, and Speyside.

*Forks of the Credit Provincial Park*

The Forks of the Credit Provincial Park is located approximately 24 km northwest of Brampton and is considered part of the Niagara Escarpment Biosphere Reserve. The Park, which is located on the Bruce Trail system, features the Credit River as it narrows and rushes through a deep gorge and continues over a plunging falls. It is frequented by visitors interested in the picnic areas, excellent fishing, hiking, cross-country skiing, and snowshoeing. The Forks of the Credit is equipped with a parking lot, picnic tables, viewing platforms, toilets, and marked trails. The park is open year round however, while fishing is allowed, hunting and camping are not permitted.

The Devil’s Pulpit is located within the Forks of the Credit Provincial Park and is locally referred to as the Pulpit Ridge. It consists of a high wall of solid rock along the south bank of the Credit River in Caledon. To the southwest of the ridge, a piece of rock in the shape of a pulpit has split off from the mainland.

*Humber Valley Heritage Trail*

The portion of the Humber Valley Heritage Trail system that is located within the Preliminary Study Area begins just north of Bolton at the intersection of Highway 50 and Columbia Way. The Trail is approximately 26 km in length with a total ascent of 575 m, giving this hilly and long series of climbs a rating of intermediate to advanced. The rolling topography is typical of the Oak Ridges Moraine.

*Albion Hills Conservation Area/Campground*

The Albion Hills Conservation Area/Campground is located in the Caledon Hills on the banks of the Humber River. This area is Ontario’s first Conservation Area and boasts a 446 ha park. The Conservation Area has a beginner hiking trail approximately 9 km long with a total ascent of 197 m. Within the Area/Campground are 234 serviced and un-serviced campsites, several areas for fishing, swimming, mountain biking, cross-country skiing, and bird watching, all of which have specific operating seasons.

*Carrying Place Trail*

The Carrying Place Trail follows the Humber River from Georgian Bay to Lake Ontario. There are marked crossings along the River which commemorate its use as a significant former First Nations portage route.

*Overview of Environmental Conditions and Constraint Working Paper December 2010**Trans Canada Trail*

The Trans Canada Trail is an 18,000 km community based recreational corridor that winds its way through every province and territory in Canada, linking 800 communities together along its route. When the trail is completed, this will be the longest trail of its kind in the world. The trail will accommodate six preferred activities: walking, cycling, and horseback riding, canoeing, cross-country skiing, and snowmobiling. The Trans Canada Trail touches the Preliminary Study Area at Guelph and weaves its way in and out of the northern boundary, through Caledon east to just north of Bolton, as shown on **Exhibit 4-7**.

*4.5.7 Aggregate and Mineral Resources*

In Section 2.5 of the PPS, the Province has expressed an interest in the protection of mineral aggregate resources for future use. The protection of the provincial interest is accomplished by restricting development adjacent to and on aggregate resource deposits. The PPS indicates that development can occur on potential mineral aggregate resources if:

- Resource use would not be feasible; or
- The proposed land use or development serves a greater long-term public interest; and
- Issues of public health, public safety and environmental impact are addressed.

Notwithstanding these requirements, development of land with mineral aggregate resource potential must take into account all relevant PPS policies and the full intent of the PPS.

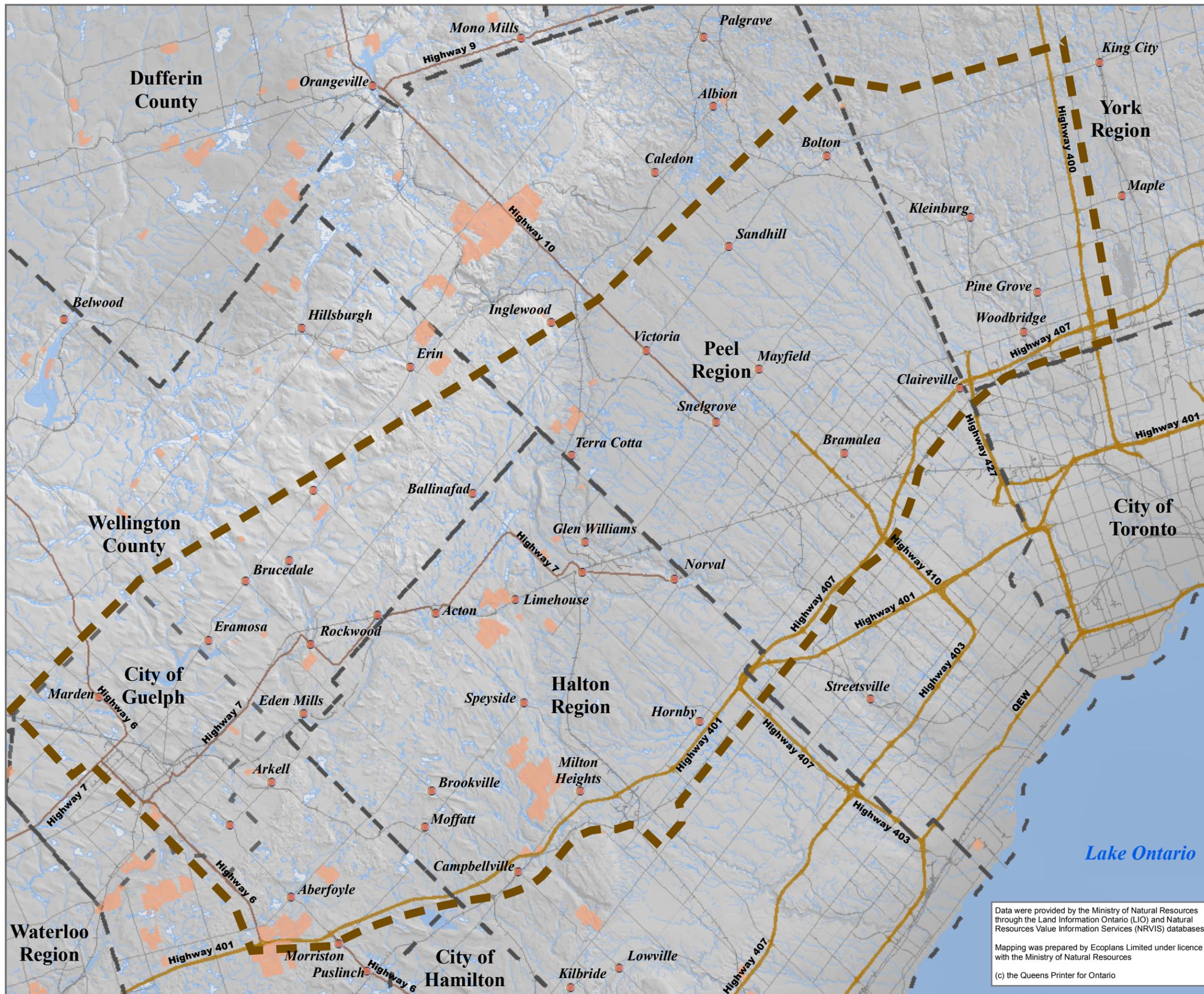
Provincial policies regarding aggregate resources through the Niagara Escarpment Plan and Greenbelt Plan also apply to those lands that lie within their individual jurisdictions. Parts of the Preliminary Study Area are identified as containing aggregate resources. York Region, Peel Region, and Wellington County have identified areas in their Official Plans where aggregate resources occur. This data is from the MNR Aggregate Resource Inventory Papers which identifies aggregate resources in Ontario. Halton Region has not identified aggregate resource areas in its Official Plan. However, Aggregate Resource Inventory Papers that identify aggregate resources are available for Halton Region. Licensed Pit Operations and Aggregate Resource Areas are shown in **Exhibit 4-8**.

*Wellington County*

Wellington County identifies Mineral Aggregate Areas on Schedule “A” of the County Official Plan. The areas designated are locations where there is high potential for mineral aggregate resources to be found with the possibility for viable extraction. The Mineral Aggregate Areas are protected for the future, subject to policies found in Section 6.6 of the County Official Plan. Wellington County has mineral aggregate resources throughout the Preliminary Study Area.

*Region of Halton*

Halton is home to the following types of mineral aggregates: stone; sand and gravel; and shale. Stone (limestone or dolostone) and sand and gravel are used as construction materials. Shale is a soft clay stone used as a main ingredient in the manufacture of brick. Halton Region has a



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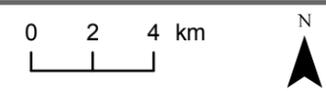
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### Exhibit 4 - 8 Pits and Quarries

#### Legend

- GTA West Preliminary Study Area
- Municipal Boundary
- 400 Series Highways
- Highways
- Pits and Quarries

Date: May 2010



Data were provided by the Ministry of Natural Resources through the Land Information Ontario (LIO) and Natural Resources Value Information Services (NRVIS) databases.  
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number of shale deposits that are the source of the brick used in the Ontario construction industry.

*Region of Peel*

The Region of Peel identifies High Potential Mineral Aggregate Resource Areas (HPMARA) on Schedule C of the Regional Official Plan. The HPMARA designation identifies sand and gravel, and shale resources in the Region. The majority of the HPMARA designated areas are located in Caledon, with an area also identified in northwest Brampton. Lower Tier Official Plans must conform to the intent of the HPMARA designation in ensuring the long-term protection of aggregate resources. Peel Region has two significant aggregate applications in the Town of Caledon and a number of shale deposits that are the source of the brick used in the Ontario construction industry.

*Region of York*

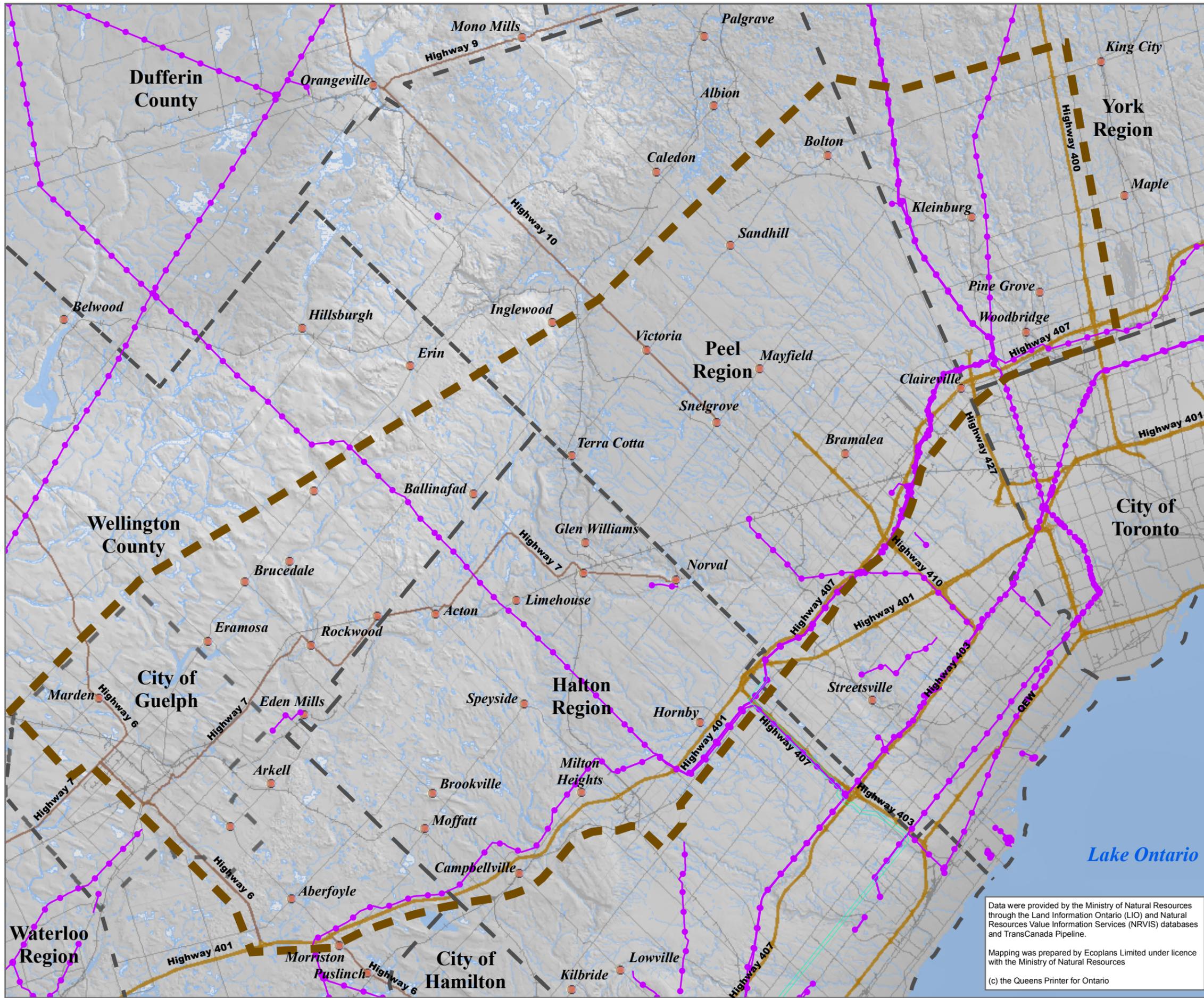
The Region of York identifies Mineral Aggregate Resources for protection in Map 7 of the Regional Official Plan. Within the Preliminary Study Area there is an area at the west side of the Township of King that has been identified. The lands designated in the Regional Official Plan are to be protected for future use.

#### 4.5.8 Major Utility Transmission Corridors

Major hydro transmission facilities as well as gas utilities and pumping stations are scattered throughout the Preliminary Study Area. Major utility lines are shown on **Exhibit 4-9**.

In order to meet the increasing energy demands within the Preliminary Study Area and surrounding areas, Hydro One, under the recommendation of the Ontario Power Authority, has completed the approval processes to build a new transmission line along the existing line, to provide additional power from the Bruce area to the switching station in Milton (shown in **Exhibit 4-10**). The new double-circuit 500 kV lines will require the purchase of an additional 61 m of land on the east side of the existing 230 kV line from Orangeville to Milton, passing directly through the Preliminary Study Area. The proposed project is forecast to be in-service by December 1, 2011.

Information will be collected, as the study proceeds.



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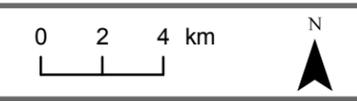
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**Exhibit 4 - 9  
Utility Lines**

**Legend**

-  GTA West Preliminary Study Area
-  Municipal Boundary
-  400 Series Highways
-  Highways
-  Utility Lines
-  TransCanada Pipeline

Date: May 2010



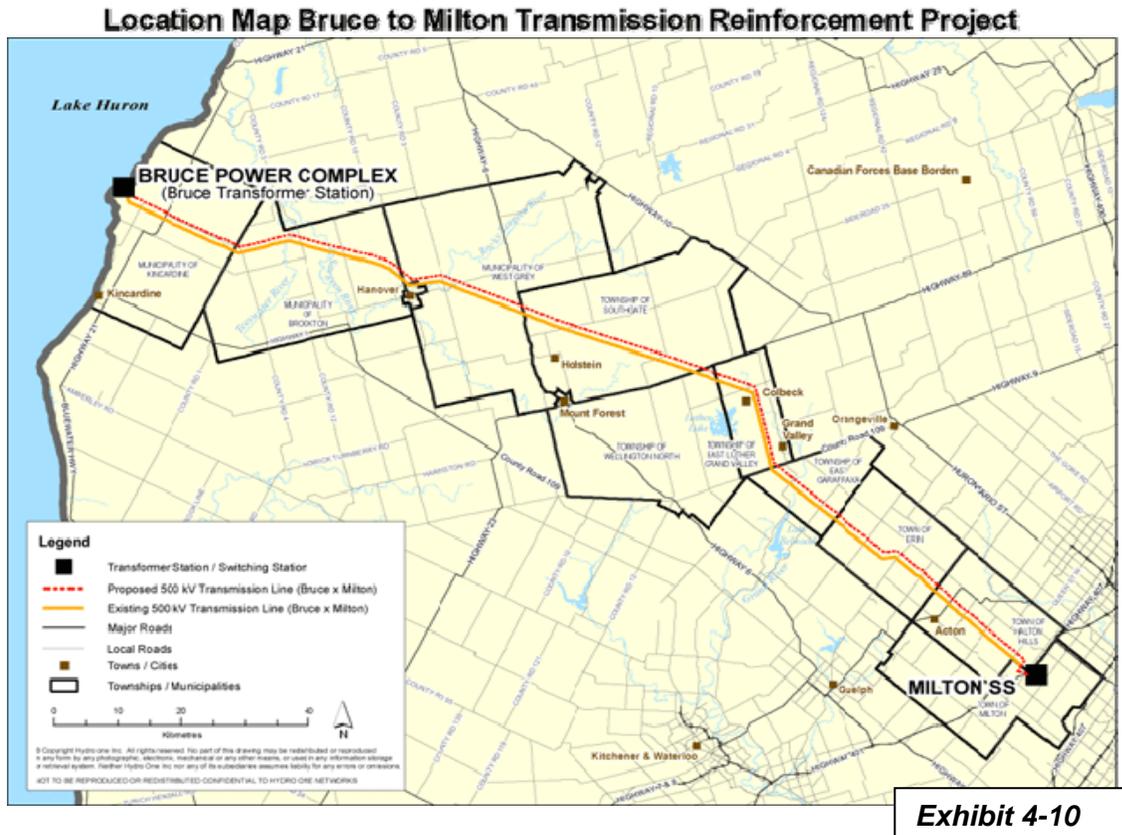
Data were provided by the Ministry of Natural Resources through the Land Information Ontario (LIO) and Natural Resources Value Information Services (NRVIS) databases and TransCanada Pipeline.

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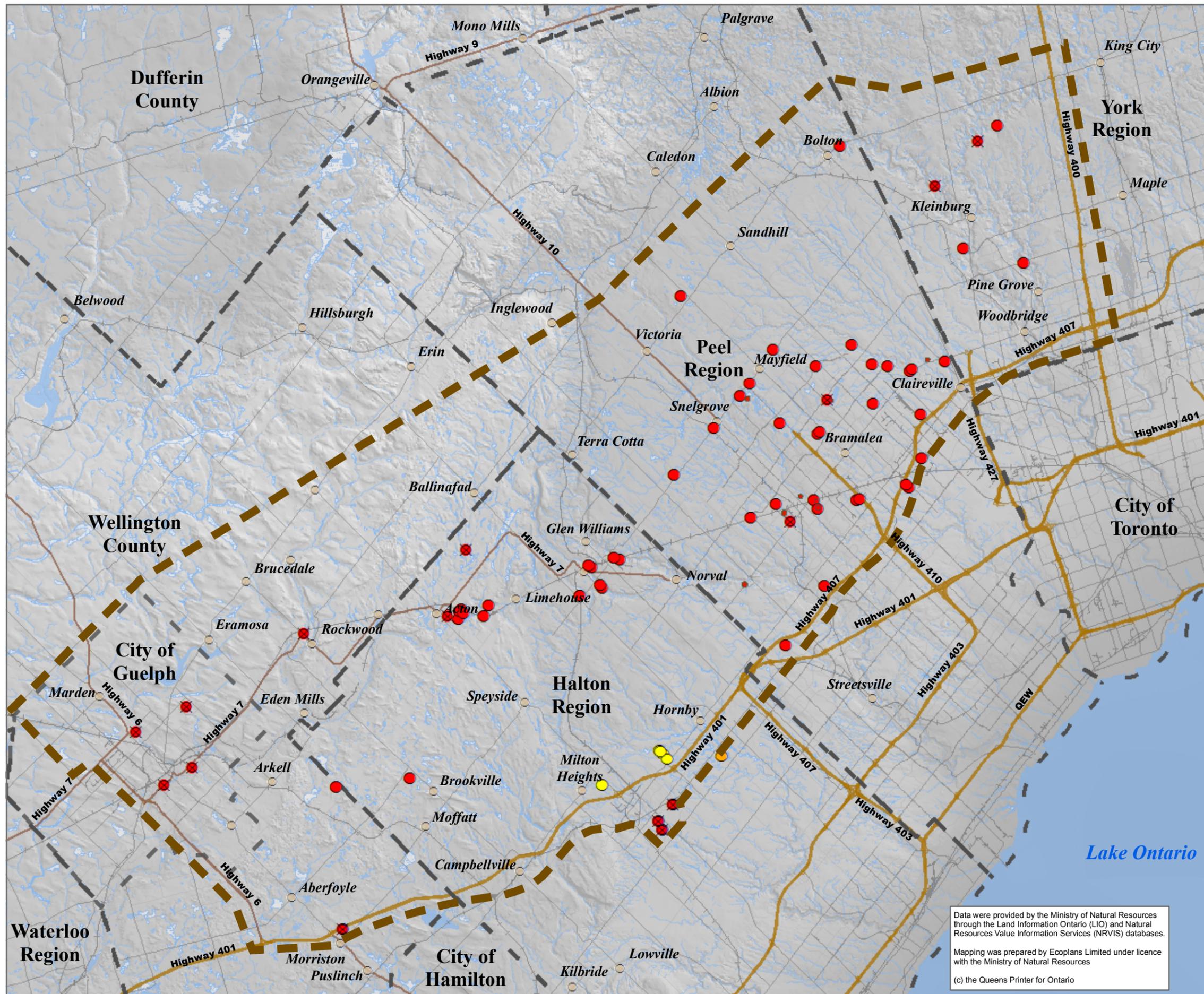
4.5.9 Contaminated Property

An assessment of potentially significant contaminated property and waste management facilities was conducted by using secondary source data, including a review of the MOE Waste Disposal Site Inventory, Brownfield Site Registry, Coal Gasification Plant Inventory, and the Federal Contaminated Sites and Solid Waste Landfills Inventory. These features are shown on **Exhibit 4-11**.

The Preliminary Study Area was examined to determine the presence of any potential environmental issues. Small waste dumps, private (or unregistered) waste disposal sites, and automotive wrecking facilities were not identified. These features are typically examined in more detail at a later stage of the study process.

4.5.10 Waste Disposal Site Inventory

The MOE Waste Disposal Sites Inventory provides the locations of all active and inactive waste disposal sites in Ontario. This inventory was compiled in 1991 by the MOE. “Class A” sites are those that are deemed to have the potential to impact human health because of the proximity to human development. “Class B” sites are those that are deemed to have the potential to impact mainly the environment. Further subdivisions of each class reflect site-specific waste characteristics as specified in the MOE *Waste Disposal Site Inventory* (1991).



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**Exhibit 4 - 11 Waste Sites**

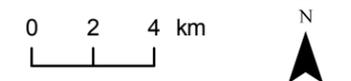
**Legend**

- GTA West Preliminary Study Area
- Municipal Boundary
- 400 Series Highways
- Highways

**Waste Sites**

- Waste Disposal Site (Active/Unknown)
- Waste Disposal Site (Closed)
- Brownfield Site
- Coal Gasification Plant
- Federal Contaminated Site

Date: May 2010



Data were provided by the Ministry of Natural Resources through the Land Information Ontario (LIO) and Natural Resources Value Information Services (NRVIS) databases. Mapping was prepared by Ecoplans Limited under licence with the Ministry of Natural Resources (c) the Queens Printer for Ontario

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Within the Preliminary Study Area, 43 waste disposal sites are identified. Based on the data reviewed, 30 of these sites are classified as closed waste disposal facilities and the remaining 13 facilities are still active. The locations of these sites is scattered throughout the Preliminary Study Area, as shown on **Exhibit 4-11**.

#### 4.5.11 Brownfield Site Registry

The Environmental Site Registry (ESR) is a publicly accessible database documenting any Record of Site Condition (RSC) that has been filed with the MOE since the inception of the ESR in October 2004. The RSC documents any environmental site assessment (i.e., Phase I and Phase II ESAs), site clean-up, and/or site specific risk-assessment completed at a particular property. This legal instrument is pursuant to Ontario Regulation (O.Reg.) 153/04 of Part XV.1 of the Ontario *Environmental Protection Act*.

According to the MOE Brownfield ESR, 77 sites are located within the Preliminary Study Area.

#### 4.5.12 Coal Gasification Plant Inventory

An inventory of all known and historical coal gasification plants has been collected by the MOE. It identifies sites that produced and continue to produce or use coal tar and other related tars. This information is effective to 1988, but the program has since been discontinued.

A review of the Coal Gasification Plant Inventory revealed that there is one closed coal gasification plant within the Preliminary Study Area. This site is located in former Chinguacousy Area in the City of Brampton.

#### 4.5.13 Federal Contaminated Sites and Solid Waste Landfills Inventory

This inventory is a publicly accessible database which documents all known Federal Contaminated Sites and Solid Waste Landfills. A contaminated site is defined by the Federal Government as “one at which substances occur at concentrations above background levels and pose, or are likely to pose, an immediate or long-term hazard to human health or the environment, or exceeding levels specified in policies and regulations.”

Based on the review of the inventory, seven federal contaminated sites or solid waste landfills were identified within the Preliminary Study Area.

## 4.6 SUMMARY OF SIGNIFICANT/SENSITIVITY OF SOCIO-ECONOMIC ENVIRONMENT

A significant component of the socio-economic environment in the Preliminary Study Area is of interest to Six Nations of the Grand River Territory and Mississaugas of the New Credit First Nations based on the potential to impact on traditional lands used for hunting and fishing and on potential impacts to their rural community. Continued discussions with the First Nations, regarding the consideration of their traditional land uses and interest in the area, is important to this study.

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At this stage of the study process, general and preliminary land use constraints have been identified. Potential displacement of existing residences, businesses or institutional uses is recognized as a high land use constraint to transportation corridor development. Consequently, existing developed urbanized areas pose land use constraints, as do developed areas of villages and hamlets, clustered rural residential development and existing community institutional features. Isolated residences, industrial development, recreational uses and other special area uses are also recognized as land use constraints.

The next level of land use impact is undeveloped but fully serviced areas and approved Plans of Subdivision. Investment in infrastructure and the anticipated development potential of these areas is recognized.

The identification and protection of Specialty Crop Areas and Prime Agricultural Lands are important in the Preliminary Study Area, as supported by the Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA) policies regarding agriculture. Consistent with provincial policy, the following priority will be given to agricultural lands within the Preliminary Study Area:

- Specialty crop areas;
- CLI Class 1 soils;
- CLI Class 2 soils;
- CLI Class 3 soils; and
- Other soils.

Recreational trails pose a moderate constraint to corridor expansion/development. Further investigation would be required should an alternative impact existing or planned trails. Mitigation measures may be available to eliminate or minimize adverse impacts.

Areas containing significant aggregate resources within the Preliminary Study Area present a moderate constraint in terms of the potential disruption/displacement of an active extraction activity, as well as the need to protect identified areas containing this nonrenewable resource. As a mitigative measure, the resource can be extracted prior to implementation if required. Potential adverse impacts on active aggregate business operations will be considered.

The potential for the presence or absence of environmental issues was assessed from a broad perspective. Further review and site inspections will be completed once the alternatives have been generated to determine if these sites are of concern and to identify other potential sites of environmental concern.

