





Planning Peterborough to 2031:

How the Growth Plan for the Greater Golden Horseshoe will affect the City of Peterborough

April 20, 2009

City of Peterborough
Planning Division

EXECUTIVE SUMMARY

The Growth Plan for the Greater Golden Horseshoe

The Growth Plan for the Greater Golden Horseshoe (GGH) is a provincial plan that came into effect on June 16, 2006 and establishes a policy framework for managing growth in the GGH to the year 2031. With a vision to building stronger, more prosperous, and complete communities, the Growth Plan will guide municipal and provincial decisions on a wide range of issues that include transportation, infrastructure planning, land use planning, urban form, housing, natural heritage, and resource protection. The Growth Plan intends to achieve this overall vision through specific policy directions that aim to:

- Revitalize downtowns to become vibrant and convenient centres
- Create complete communities that offer more options for living, working, shopping, and playing
- Provide greater choice in housing types to meet the needs of people at all stages in life
- Curb urban sprawl and protect farmlands and greenspaces
- Reduce traffic gridlock by improving access to a greater range of transportation choices

Population and Employment Forecasts for Peterborough

The Growth Plan provides population and employment projections for all upper and single-tier municipalities in the GGH and requires municipalities to use these projections when planning for future growth. From 2006 to 2031, the City of Peterborough is forecast to grow by:

- An additional 13,000 people to reach a total population of 88,000
- An additional 1,300 jobs to reach a total of 42,000 jobs

The Growth Plan's Intensification and Density Targets

The Growth Plan contains intensification and density targets that municipalities within the GGH must adopt into their Official Plans and plan to achieve. While these targets represent only a portion of the Growth Plan's requirements that municipalities are expected to adopt into their Official Plans, these targets are its central component intending to create a compact urban form that maximizes the use of our new and existing infrastructure. The Growth Plan specifically requires the City of Peterborough to:

- Plan to achieve an average density of 150 residents and jobs per hectare in the Downtown Peterborough *Urban Growth Centre* by 2031
    - The existing density of Peterborough's Urban Growth Centre has been estimated to be about 100 residents and jobs per hectare. To achieve 150 residents and jobs per hectare by 2031, an additional 4,800 residents and jobs would be required. This is a 50% increase over the present situation and represents about 33% of the total population and employment growth forecast for the City to the year 2031.

  - While the City may not necessarily reach this target by 2031, the redevelopment and revitalization of Downtown Peterborough will nevertheless need to be a central part of the City's future growth strategy. The City's new Central Area Master Plan which was released in draft form to the public in December 2008 has the potential to play a significant role in stimulating growth in the Peterborough's UGC on a scale envisioned in the Growth Plan.
  - Approximately 13% of the UCG is located within the Jackson Creek Flood Plan and is subject to Special Policy Area 3.4.5 in the Official Plan. The City should seek provincial clarification regarding the applicability of these policies in light of Provincial Policy Statement restrictions on development and site alteration in areas subject to flooding hazards.

- <u>Direct at least 40% of all annual residential development to its *Built Area* by 2015 and for each year thereafter to 2031</u>
  - Peterborough's Built Area boundary includes the area of the City that had been developed as of June 16, 2006 as well as areas that were approved for development but not fully built-out.
  - It is forecast that approximately 8,800 new residential units will be required within the City to accommodate its existing and new population. This means that of these new units, about 3,500 or 40% will need to be constructed within the Built Area boundary.
  - The 40% intensification target will become more difficult to achieve over time as existing vacant lands that were included within the Built Area are developed and more emphasis on redeveloping existing under-utilized buildings in the City is required.
  - To ensure that the 40% intensification target is achieved, the Growth Plan requires Peterborough to develop an intensification strategy that specifically designates nodes, corridors, and areas as places to where growth within the City's Built Area will be accommodated. Deciding which areas of the City's Built Area to designate for these purposes will be determined through a public consultation process.

- <u>Plan to achieve an average density of 50 residents and jobs per hectare within its *Designated Greenfield Area*</u>
  - Peterborough's Designated Greenfield Area (DGA) is the area that is within the City limits but outside of the Built Area boundary. The size of Peterborough's DGA is 1443 hectares once any natural features identified in the City's Official Plan or any applicable provincial plan are removed.
  - The capacity of Peterborough's entire DGA based on the Growth Plan target of 50 residents and jobs/ha is 72,150 residents and jobs**.** However, because the City is only forecast to grow by about 14,300 people and jobs between 2006 and 2031, its DGA will not achieve full build out at this density for several decades beyond the Growth Plan planning horizon. However, to remain compliant with the Growth Plan target, the City will

need to ensure that the new areas of the DGA that develop, are planned to do so at an average density of 50 residents and jobs per hectare.

- It is forecast that all employment lands and residential areas within the DGA will accommodate an average of 7 jobs per hectare over the entire DGA at full build out. This means that the remainder of the DGA will need to build out an average of 43 people per hectare in order to achieve the target of 50 people and jobs per hectare. However, because large portions of residentially designated areas are typically used for public services such as roads, hydro corridors, parks, schools, and storm water management rather than for residential building lots, on a property-by-property basis, the actual density of net residential development will be required to be substantially higher than previously noted.
- It is forecast that approximately 5,300 residential units, accommodating approximately 12,100 people will be constructed in Peterborough's DGA to 2031. To accommodate these people at an average density of 43 people per hectare, about 250 hectares of residential land will be required. This means that only 250 hectares of the 1,230 hectares that are currently available for residential purposes in the City's DGA will be required by 2031.
- The traditional residential density of Peterborough's greenfield areas has typically been about 29 people or 13 units per hectare. These low-density residential areas are predominantly made up of single-detached homes and are reflective of the strong market demand for lower density housing forms in the City of Peterborough. However, to achieve an average density of least 43 people per net hectare, fewer single detached homes and more multi-unit residential developments that include row housing and multi-storey buildings will need to be built.

Peterborough is a Unique Community Within the GGH

In many ways stemming from both its geographic location and demographic make-up, the City of Peterborough is a unique community within the Greater Golden Horseshoe. Because of this uniqueness, the City may find it more difficult to achieve the Growth Plan's intensification and density targets than most other urban municipalities in the GGH.

Specifically, Peterborough is the most spatially isolated Urban Growth Centre in the GGH, located about 30 kilometres further away from its nearest UGC than any other pair of UGCs. Because of this isolation, Peterborough has generally developed as a self-sustaining community that relies less on economic synergies with neighbouring municipalities to achieve its growth than most other municipalities in the GGH. This self-sustaining nature and geographic isolation is reflected by very low commuting patterns between the City and areas outside of Peterborough County and the City of Kawartha Lakes and by a significantly significantly lower population and employment growth outlook than most other municipalities in the GGH.

Additionally, because of its location, Peterborough functions as the principal employment centre for its surrounding area with more than twice as many people commuting into the City each day for work than leaving. The central place role of Peterborough appears to be further reinforced as more people are working in service industries such as health care and education and less in manufacturing industries when compared to other urban GGH municipalities. Therefore, with Peterborough being the regional service centre for the Kawarthas, it has much more in common with cities outside the GGH such as Belleville and North Bay than it does with cities like Kitchener and Barrie that are located inside the GGH.

Demographically, Peterborough has a significantly older population than most other urban GGH communities. Conversely, Peterborough also has a proportionally smaller youth population and a significantly lower average household size than most other areas of the GGH. Therefore, to achieve the same density target for its Designated Greenfield Area of 50 people and jobs per hectare, Peterborough will need to construct more residential units proportionally than any other urban municipality in the GGH. This translates into the City being required to actually achieve a built form in its DGA that reflects a higher density of dwellings than most other areas in the GGH.

From an employment and demographic perspective, Peterborough appears to have more in common with slower growing cities located outside the GGH such as Belleville, North Bay, Sudbury and Thunder Bay than it does with rapidly growing cities such as Barrie, Kitchener, and Vaughan that are located within the GGH. From a growth management and land use planning perspective, the dissimilarities between Peterborough and the rest of the GGH could mean that major planning issues affecting the rapidly growing urbanized portions of the GGH are less relevant in the Peterborough context. Consequently, implementing Growth Plan policies that are really tailored to addressing issues relevant to places such as Barrie, Kitchener or Guelph may affect Peterborough's ability to maintain itself as a complete community as it exists today. Therefore, should the opportunity arise, it may be worthwhile to explore Peterborough's place in the provincial Growth Plan framework. At the earliest, this could be done at such a time when a Growth Plan is prepared for eastern Ontario.

Overall

To conform to the policy directions of the Growth Plan, the City will be required to optimize the land within its existing built areas by strategically intensifying growth through both infill and redevelopment. This marks a significant shift in Peterborough's traditional growth patterns where the majority of its new residential development has been single-detached dwellings built at the edge of the City. If Peterborough is to achieve the Growth Plan's intensification and density targets, more multi-unit residential developments that include row housing and multi-storey buildings will need to be constructed. The City is therefore faced with the challenge of shifting its predominantly low-density residential development patterns into a more compact, transit-supportive urban form. Also, since the Downtown Peterborough UGC needs to absorb a significant amount of the City's future growth, additional focus needs to be placed on revitalizing and redeveloping the central downtown core. The City has already taken significant steps in this direction however, since the implementation of the new Central Area

Master Plan will play a key role in developing policies and programs to focus development in the UGC.

While achievement of the Growth Plan's density and intensification targets will not be easy, it is important to remember that the Growth Plan is intended to change the way that land use planning has been traditionally done in the GGH. With aims of limiting urban sprawl so that we can make better use of our existing natural resources and infrastructure investments, the Growth Plan does not anticipate, promote, or facilitate more of the same. The effective implementation of the Growth Plan however, will entirely depend on the extent to which it is embraced by the various stakeholders involved in community development that include developers, politicians, and the general public.

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1.0 INTRODUCTION

1.1 Purpose

This background report will describe the Growth Plan for the Greater Golden Horseshoe (GGH) and its key structural elements and requirements while outlining what the Growth Plan will mean for the City of Peterborough from a planning perspective. This report will also describe characteristics that distinguish Peterborough from the broader GGH region and discuss how these distinguishing features may pose a challenge to the City as it plans to implement the Growth Plan. The report also includes an Appendix to provide further detail on the research methods, data sources, and major assumptions used to generate its major findings.

1.2 What is the Growth Plan for the Greater Golden Horseshoe?

The Growth Plan for the Greater Golden Horseshoe is a provincial plan that came into effect on June 16, 2006, establishing a policy framework for managing growth in the GGH to 2031. Prepared by the Province under the authority of the Places to Grow Act (2005), the Plan applies to the Greater Golden Horseshoe area that stretches around the western edge of Lake Ontario from Northumberland County on its northern shore to the Region of Niagara on its southern shore, and as far north as Georgian Bay. As one of the fastest growing urban regions in North America, the GGH is forecast to grow by almost 4 million people and 2 million jobs by 2031.

In accordance with Subsection 3(5) of the Ontario Planning Act, all municipal planning decisions must conform to the Growth Plan. Accordingly, the Growth Plan will guide municipal and provincial decisions on a wide range of issues including transportation, infrastructure planning, land use planning, urban form, housing, natural heritage, and resource protection, with a vision to building stronger, more prosperous, and complete communities. Overall, the Plan seeks to grow in a more complete and efficient way so that communities can provide residents with the opportunity to live, work, shop, and play without the need to rely on private automobiles. Therefore, one of the main intentions of the Growth Plan is to reduce the adverse effects associated with the rapid urban development that has characterized much of the GGH region since the 1950s. These effects include traffic gridlock, deteriorating air quality, urban sprawl and the continued disappearance of our agricultural lands and natural resources.

Within the GGH, the Growth Plan delineates an Inner Ring of municipalities centred on Toronto that will accommodate the majority of the region’s anticipated growth to 2031. Also, the Plan delineates an Outer Ring of municipalities that will provide some relief to the Inner Ring from its anticipated growth pressure by accommodating a significant share of the region’s growth in economically and socially complete communities. Separated by the provincially designated Greenbelt, the Inner Ring is a predominantly urban region while the Outer Ring is predominantly rural with interspersed small and mid-sized urban communities. As seen in Figure 1, the City of Peterborough is located within this Outer Ring.

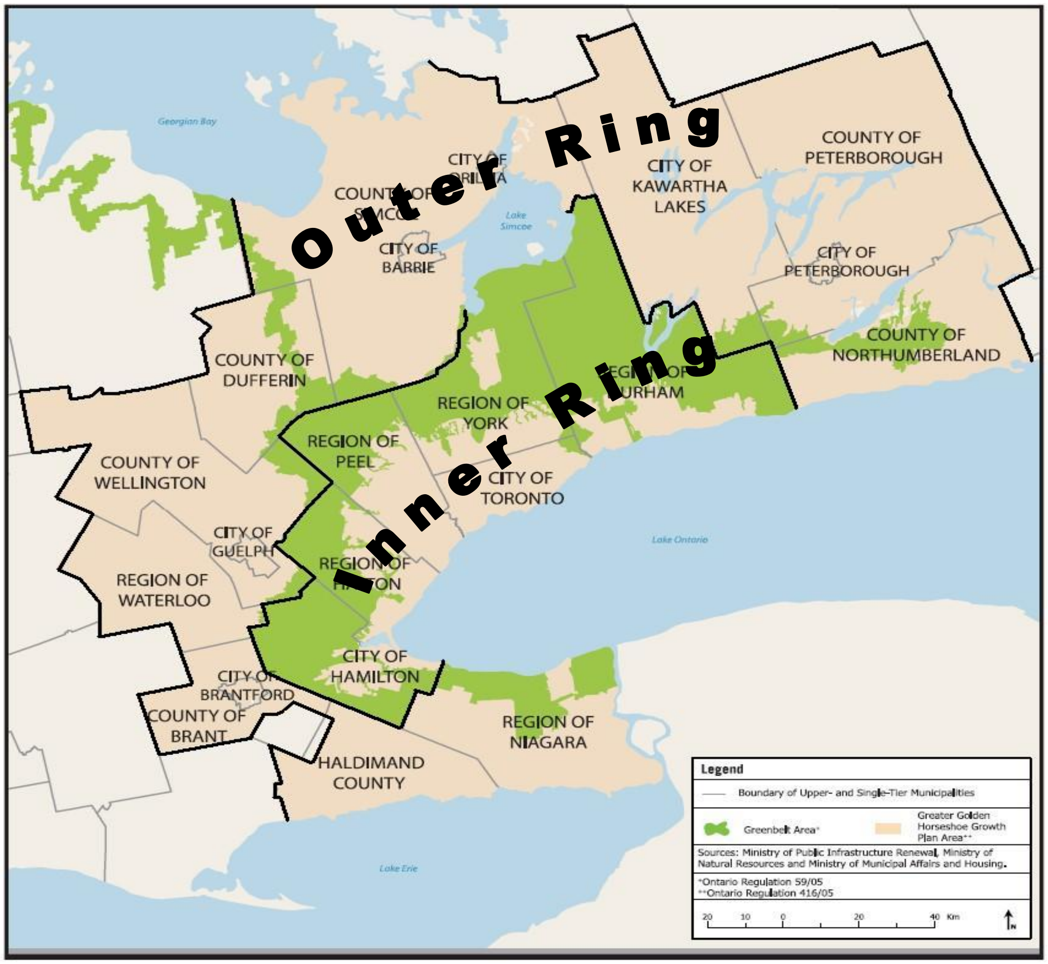

Figure 1: ***The Inner and Outer Rings of the GGH*** (Source: Growth Plan Schedule 1)

In order to influence where growth will occur in the GGH to 2031 and reduce infrastructure spending, the Growth Plan specifies that all development must be directed to settlement areas such as cities, towns and villages (except for uses that need to be located in rural areas). Additionally, in order to change the shape of existing GGH communities, the Plan establishes minimum annual requirements for directing development to the existing built-up area of settlements as well as minimum density targets for development on those lands that are within settlements but are located outside the built-up area (known as the Designated Greenfield Area, or DGA).

Of all the settlements in the GGH, the Growth Plan designates 25 in particular as Urban Growth Centres (UGC) (see Figure 2). These UGCs are to be planned to accommodate a significant share of the region's anticipated population and employment growth; to serve as focal areas for investment in institutional and region-wide public services as well as commercial, recreational, cultural and entertainment uses; to accommodate and support major transit infrastructure; and to serve as high density major employment centers that will attract provincially, nationally or internationally significant employment uses. Along with establishing UGCs, the plan also establishes a graduated development density target for each UGC based on their capacity for attracting and accommodating development investment and their relative significance within the GGH as a focal point for economic activity.

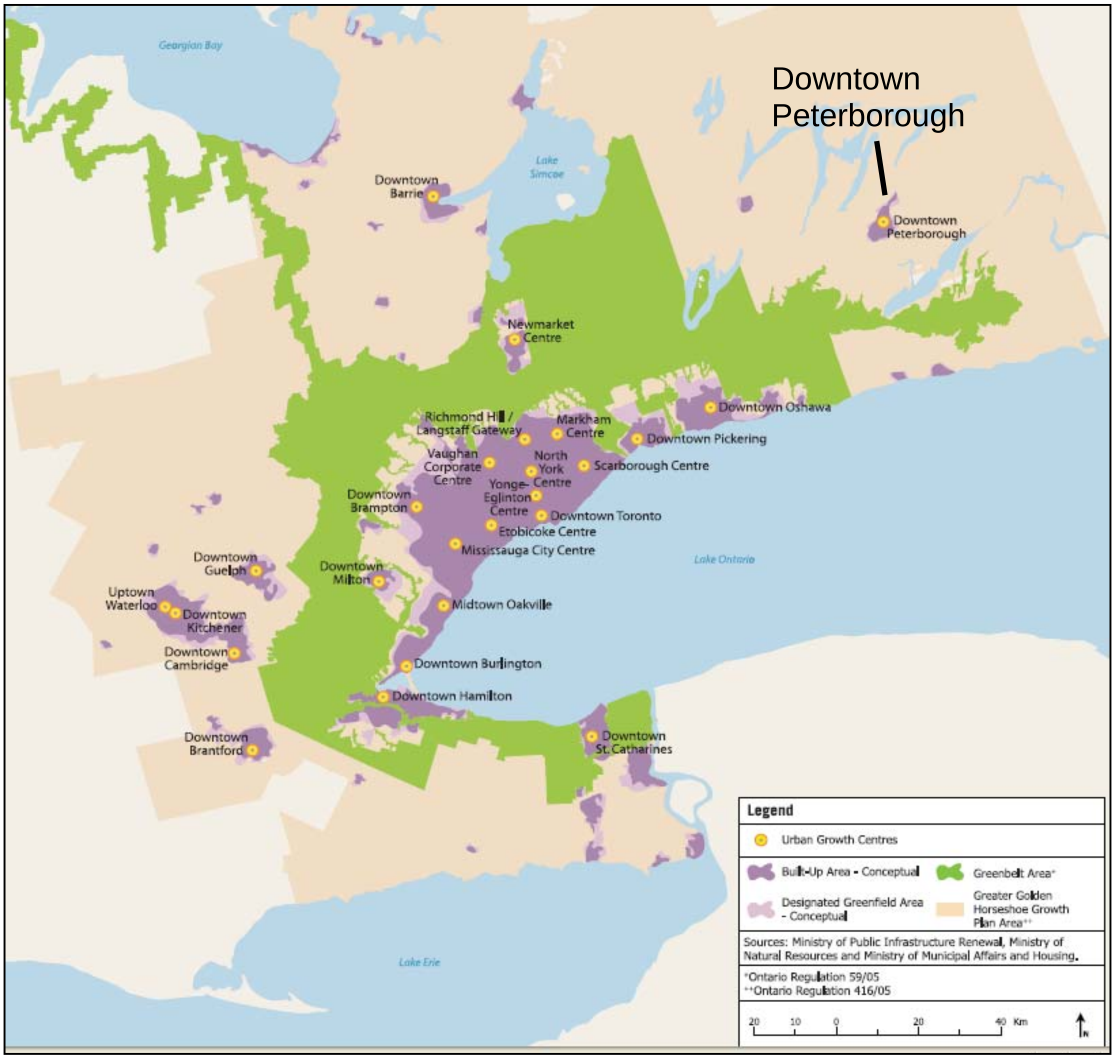

Figure 2: ***Urban Growth Centres in the GGH*** (Source: Growth Plan Schedule 4)

As seen in Figure 2, there are there are eight designated UGCs in the Outer Ring, one of which is Downtown Peterborough. Of the Outer Ring UGCs, Downtown Peterborough is the most easterly and also the most northerly, with the exception of Downtown Barrie.

A key guiding principle of the Growth Plan is to optimize the use of existing and new infrastructure such as roads, highways, transit routes, rail lines, bridges, sewers, and water/wastewater treatment facilities so that they would support growth in a compact, efficient form. The Province believes that a more compact urban form will lead to significant infrastructure cost savings both in terms of the maintenance of our existing facilities and through the reduced need for additional investments because of us maximizing the use of our existing and new infrastructure. Therefore, the Ontario Ministry of Energy and Infrastructure will be prioritizing provincial infrastructure in accordance with Policy 3.2.1 of the Growth Plan which states: *"Priority will be given to infrastructure investments made by the Province of Ontario that support the policies and schedules of this Plan."* Accordingly, municipalities with Official Plans that conform to the Growth Plan may be significantly rewarded with new or renewed infrastructure investments. Based on this, it is strategically important for Peterborough to prepare an OPA that closely aligns the City's future land use planning direction with this new provincial planning legislation.

As a part of the Growth Plan's implementation, all upper- and single-tier municipalities within the GGH must ensure their Official Plans comply with the policy directions of the Growth Plan by June 16, 2009. In response, the City of Peterborough is developing an Official Plan Amendment (OPA) to reflect these new provincial policy directions. This OPA will provide a locally based strategy and policies to help guide the growth of the City to the year 2031.

1.3 Population and Employment Projections for the City of Peterborough

Schedule 3 of the Growth Plan provides population and employment projections for all upper and single-tier municipalities in the Greater Golden Horseshoe. In accordance with Provincial legislation, all affected municipalities must adopt these projections into their Official Plans. For the City of Peterborough, the population and employment projections are as follows:

Population	Employment
2001 – 74,000	2001 – 37,000
2011 – 79,000	2011 – 41,000
2021 – 84,000*	2021 – 42,000*
2031 – 88,000*	2031 – 42,000

(*Figures for 2021 and 2031 were negotiated between the City of Peterborough and Peterborough County and approved by the Province)

The 2006 Census identified Peterborough's population to be about 75,000. This means that the City is forecast to grow by approximately 13,000 people from 2006 to 2031. Annually, this projected growth translates into an average increase of 600 residents per year between 2006 and 2021 and then declining to 400 residents per year between 2022 and 2031.

Similarly, based on commuting flow and employment data tabulated by the Census, Peterborough's total employment was approximately 40,700 jobs (fixed-location) in 2006. Therefore, based on the Growth Plan projection, the City should accommodate an additional 1,300 jobs by 2031. Annually, this represents only 0.13% growth in employment throughout the Growth Plan horizon.

When combined, the City of Peterborough is forecast to grow by about 14,300 people and jobs from 2006 to 2031.

1.3.1 Growth Plan projections compared to Peterborough's recent population growth

Between 1991 and 2006, the City of Peterborough grew at an average rate of 0.61% annually. Based on the Growth Plan forecasts for Peterborough to the year 2031, the City will grow at an average annual rate of 0.66% over the 25-year period from 2006. This suggests that Peterborough will grow slightly faster between 2006 and 2031 than it did in the preceding 15 years. This steady rate of population growth is indicated in Figure 3.

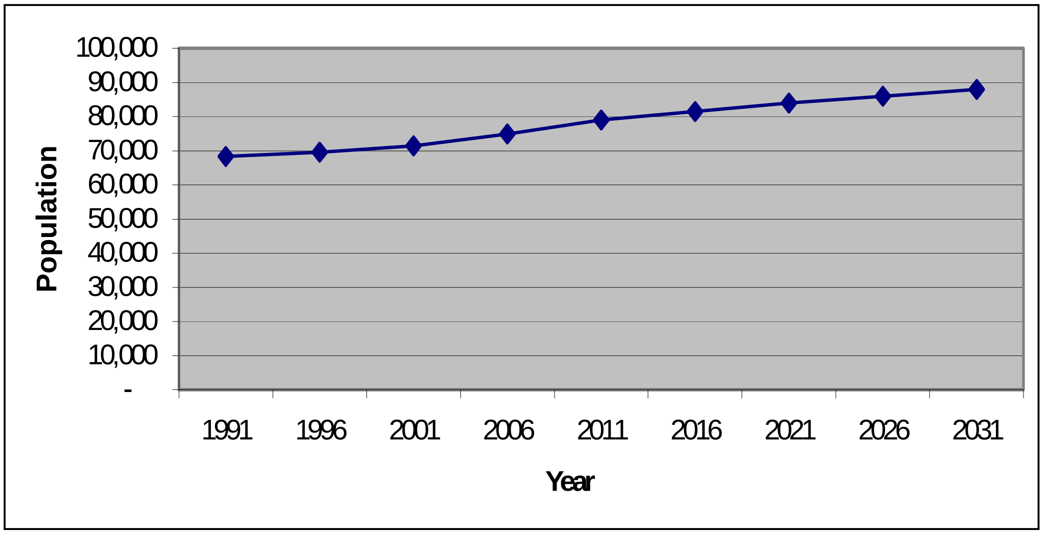

Figure 3: ***Population of the City of Peterborough from 1991 to 2006 and projected to 2031*** (Source: 1991 to 2006 Censuses)

However, Peterborough's rate of population growth is forecast to slow down over the course of the period from 2011 to 2031. This trend is captured in Figure 4 where it is indicated that the City's annual population growth rate will peak at 1.06% between 2006 and 2011 and then decline gradually to 0.48% between 2026 and 2031.

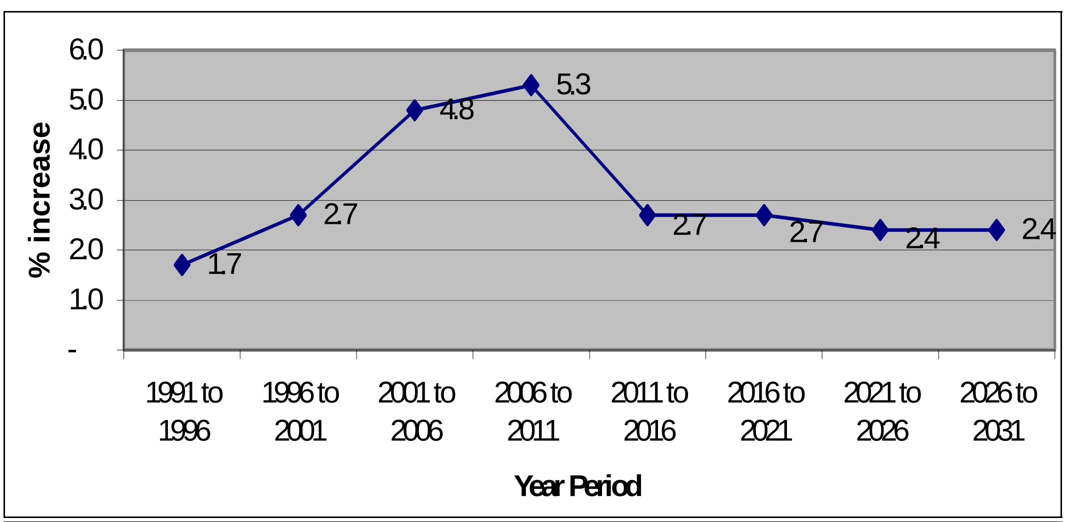

Figure 4: ***Peterborough's population % growth rate trend over five year intervals from 1991 to 2006 and projected to 2031*** (Source: 1991 to 2006 Censuses)

Overall, the Growth Plan population forecasts for the City of Peterborough are generally consistent with observed growth trends since 1991.

1.3.2 Growth Plan vs. Ministry of Finance population projections for Peterborough

The Ontario Ministry of Finance projects significantly greater population growth for Peterborough than the Growth Plan does. Whereas the Growth Plan currently forecasts that Peterborough City and County will have a combined 149,000 people by 2031, the Ministry of Finance forecasts that Peterborough City and County will have 159,600 people, a difference of about 10,000. If the existing 60:40 population split between the City and County is assumed to the year 2031, the City of Peterborough will have a population of about 96,000 people. This is 8,000 more than what is currently anticipated for the City based on the existing Growth Plan forecasts. However, since the Ministry of Finance projections have no legal status when it comes to planning legislation, it is the numbers contained in Schedule 3 of the Growth Plan that municipalities in the GGH must incorporate into their Official Plans and use when planning for future growth. Yet, because the Ministry of Finance projections are significantly greater than the Growth Plan forecasts, it is reasonable to question whether the Ministry of Energy and Infrastructure is allocating an adequate amount of growth to both Peterborough City and County. Section 2.5 of this report, which discusses potential drivers of future population and employment in the Peterborough region, provides further reasons to question the Growth Plan's growth allocations for Peterborough.

1.3.3 Growth Plan projections compared to Peterborough's recent employment growth

In 2001, Census figures indicated that there were approximately 36,100 fixed-location jobs within the City. By 2006, this number grew to 40,700. Over the five-year period, this increase represented a 13% growth in the number of jobs, or an average annual growth rate of 2.6%. Moving forward from 2006, if this rate of employment growth were maintained throughout the planning horizon of the Growth Plan, the City of Peterborough would expect to have a total of 67,150 jobs located within its boundaries by 2031. This estimate is significantly higher than the Growth Plan forecast of 42,000 jobs by 2031 and is more a reflection of an unusually high rate of employment grwoth experienced between 2001 to 2006.

In 2004, Hemson Consulting Ltd. prepared a growth forecast for the City of Peterborough as part of the City's Development Charges Background Study based on 2001 Census data. In that study, it was assumed that total employment within the City would be equal to the City's Total Population multiplied by its Employment Rate (the % of Population aged 15 and over that is employed). In 2001 that rate was 55%. If this assumption were applied to the Growth Plan's 2031 forecast population of 88,000, the City would expect to have a total of 48,400 jobs. While this estimate is more in-line with the Growth Plan forecast, it is evident that the Growth Plan has lower expectations for employment growth within the City than previous research would indicate.

As will be discussed in Section 3.3.1, existing zoned employment lands in the DGA can accommodate approximately 7230 jobs. Assuming that all employment growth occurred exclusively in the City's DGA between 2006 and 2031, the City could accommodate approximately 48,000 jobs on existing zoned employment lands without directing job growth to existing built up areas.

2.0 THE CITY OF PETERBOROUGH CONTEXT

The GGH is characterized by a diverse mix of communities that face growth pressures to considerably varying extents. Within this region, the City of Peterborough is forecast to grow at a considerably slower pace than most other areas. This is important to note since many of the policy directions and targets contained in the Growth Plan appear to be intended for, and suited to, managing the development of high growth areas. This section will describe Peterborough, as it exists today, highlighting features that distinguish Peterborough from other areas of the GGH and discussing how these unique characteristics may challenge the City as it attempts to achieve the Growth Plan's policy direction.

2.1 Location

Peterborough is located on the Trent Severn Waterway in central-eastern Ontario, about 130 km northeast of the City of Toronto. Peterborough is known as the gateway to the cottage country of the Kawarthas, one of the most popular recreational regions in the province (see Figure 5). Though the City currently has a population of about 75,000 people, it has maintained a traditional small town feel. This is largely because of Peterborough's spatial separation from major provincial transportation corridors and the major urban centres that have consequently developed along them. The City of Oshawa is the closest urban growth centre to Peterborough, about 80 kilometres away (see Figure 2).

Figure 5: ***Peterborough'slocation relative to other major urban centres and its proximity to the Kawarthas tourist region*** (Source: Google Maps, 2009)

2.2 Population Growth

Compared to the GTA and the other Outer Ring municipalities that have a designated urban growth centre, the City of Peterborough is experiencing considerably less pressure for growth. This relative lack of growth can be attributed largely to Peterborough's spatial separation from other major urban centres which makes commuting between Peterborough and other major centres less desirable.

Table 1 compares the 2001-2006 population growth rates of Peterborough to other Outer Ring municipalities that also have a UGC. It also highlights Peterborough's relative isolation to the other growth centres amidst the broader GGH region. Table 2 contrasts the population growth rate of Peterborough with the regional municipalities of the GTA.

Table 1: ***The City of Peterborough's population, growth rate, and relative isolation compared to other single-tier municipalities in the Outer Ring that have a designated Urban Growth Centre***

Variable	City of Peterborough	GGH Outer Ring Avg*	City of Barrie	City of Brantford	City of Guelph	City of Waterloo	City of Cambridge	City of Kitchener
2001 to 2006 population increase (%)	4.8	11.0	23.8	4.4	8.3	12.6	9.1	7.5
2006 Population	74,898	126,013	128,430	90,192	114,943	97,475	120,371	204,668
Distance to nearest UGC (km)	80	22	50	25	25	5	20	5
Nearest UGC	Oshawa		Newmarket	Cambridge	Kitchener/ Cambridge	Kitchener	Kitchener	Waterloo
		*excludes City of Peterborough						

Source: 2006 Census, distances between UGCs measured using Google Maps

Table 2: ***The City of Peterborough's population growth rate compared to the regional municipalities of the GTA***

Variable	City of Peterborough	GTA Average*	Region of Halton	Region of Peel	Region of York	Region of Durham
2001 to 2006 population increase (%)	4.8	16.9	17.1	17.2	22.4	10.7
2006 Population	74,898	763,158	439,256	1,159,405	892,712	561,258
		*excludes City of Toronto				

Source: 2006 Census

Table 3 presents the population forecasts of the Growth Plan for each upper and single-tier municipality in the GGH and indicates that with a projected population increase of only 14.6% from 2001 to 2031, the City and County of Peterborough is forecast to be the slowest growing area in the entire GGH accounting for only 0.5% of the population growth anticipated for the GGH. In contrast, the Region's of Halton and York are forecast to be the fastest growing municipalities in the GGH with both of their populations nearly doubling by 2031. Combined they are expected to absorb about 30% of the GGH's population growth to 2031.

Table 3: ***Growth Plan population forecasts, 2001 to 2031***

Municipality	2001 Population	2031 Forecast Population	Population increase (people)	Population increase (%)	% of total GGH pop'n growth
Halton Region	390,000	780,000	390,000	100.0%	10.5%
York Region	760,000	1,500,000	740,000	97.4%	19.9%
Durham Region	530,000	960,000	430,000	81.1%	11.6%
Simcoe County/City of Barrie/City of Orillia	392,000	667,000	275,000	70.2%	7.4%
City of Guelph/Wellington County	195,000	321,000	126,000	64.6%	3.4%
Waterloo Region	456,000	729,000	273,000	59.9%	7.4%
Peel Region	1,030,000	1,640,000	610,000	59.2%	16.4%
Dufferin County	53,000	80,000	27,000	50.9%	0.7%
City of Kawartha Lakes	72,000	100,000	28,000	38.9%	0.8%
City of Brantford/Brant County	129,000	173,000	44,000	34.1%	1.2%
City of Hamilton	510,000	660,000	150,000	29.4%	4.0%
Haldimand County	46,000	56,000	10,000	21.7%	0.3%
Northumberland County	80,000	96,000	16,000	20.0%	0.4%
Niagara Region	427,000	511,000	84,000	19.7%	2.3%
City of Toronto	2,590,000	3,080,000	490,000	18.9%	13.2%
City of Peterborough/Peterborough County	130,000	149,000	19,000	14.6%	0.5%
Total	**7,790,000**	**11,502,000**	**3,712,000**	**47.7%**	

Source: Growth Plan Schedule 3

Table 4 indicates that of the approximately 3.7 million people coming to the GGH by 2031, about 76% or 2.8 million people will locate within the Inner Ring of the GGH. The remaining 24% or 902,000 people are forecast to locate to the Outer Ring of the GGH.

Table 4: ***Population forecasts for the Inner and Outer Rings of the GGH***

	2001 Population	2031 Forecast Population	Population increase (people)	Population increase (%)	% of total GGH pop'n growth
Inner Ring	5,810,000	8,620,000	2,810,000	48.4%	76%
Outer Ring	1,980,000	2,882,000	902,000	45.6%	24%
Total	**7,790,000**	**11,502,000**	**3,712,000**	**47.7%**	

Source: Growth Plan Schedule 3

Of the approximately 902,000 people projected to locate to the Outer Ring, Table 5 indicates that much of this growth will be concentrated in the western and northern areas that include cities such as Waterloo, Guelph, and Barrie. Specifically, nearly 75% of all the population growth forecast for the Outer Ring will occur in the jurisdictions of Simcoe County/City of Barrie/City of Orillia, City of Guelph/Wellington County, and Waterloo Region. In contrast, the additional 19,000 people forecast for Peterborough City and County account for only 2% of the overall population growth projected for the Outer Ring of the GGH. The only Outer Ring municipalities with a lower projected absolute growth are the Counties of Haldimand and Northumberland. Table 5 highlights the comparatively slow growth that the Province envisions for Peterborough.

Table 5: ***Population forecasts for Outer Ring municipalities***

Outer Ring Municipality	2001 Population	2031 Forecast Population	Population increase (people)	Population increase (%)	% of total OR pop'n growth
Simcoe County/City of Barrie/City of Orillia	392,000	667,000	275,000	70.2%	30.5%
Waterloo Region	456,000	729,000	273,000	59.9%	30.3%
City of Guelph/Wellington County	195,000	321,000	126,000	64.6%	14.0%
Niagara Region	427,000	511,000	84,000	19.7%	9.3%
City of Brantford/Brant County	129,000	173,000	44,000	34.1%	4.9%
City of Kawartha Lakes	72,000	100,000	28,000	38.9%	3.1%
Dufferin County	53,000	80,000	27,000	50.9%	3.0%
City of Peterborough/Peterborough County	130,000	149,000	19,000	14.6%	2.1%
Northumberland County	80,000	96,000	16,000	20.0%	1.8%
Haldimand County	46,000	56,000	10,000	21.7%	1.1%
Total	**1,980,000**	**2,882,000**	**902,000**	**45.6%**	

Source: Growth Plan Schedule 3

2.2.1 Seniors population

As noted previously in Section 1.2 and to be described in more detail in Section 3, the Growth Plan establishes minimum density targets for new development which municipalities must plan to achieve through their Official Plans. However, rather than being measured by residential units per hectare as is currently done in Peterborough's Official Plan, the Growth Plan measures density in terms of residents and jobs per hectare. Measuring density in this way will cause some municipalities difficulty in tracking and achieving the density targets because Census data must be used to establish residential density. A limitation of using Census information to track residential density is that demographic variations between municipalities can translate into varied housing needs among municipalities to achieve the same density target. As will be shown below, this variation could create a greater burden on some municipalities to provide even higher residential densities compared to other municipalities in order to meet the density target. Another limitation, as will be seen in Section 2.2.2, is that certain segments of the population are not counted as usual residents of private occupied dwellings or even as residents of the City at all thus lowering the reported overall average household size in the City and the overall residential density of the City. For Peterborough, these limitations become particularly important when considering seniors and post-secondary students.

Seniors comprise a significant proportion of Peterborough's population. Based on the 2006 Census, the Peterborough Census Metropolitan Area (CMA – includes City of Peterbrough, and the Townships of Cavan-Monaghan, Douro-Dummer, Otonabee-South Monaghan and Smith-Ennismore-Lakefield) is Ontario's oldest with a median age of 42.8. This also makes it the fifth oldest CMA in Canada. The CMA also has the highest proportion of seniors in the country at 18.2%. Table 6 indicates that the percentage of the city's population that is aged 65 and over is significantly greater than averages for Ontario and the GGH. Additionally, Table 7 indicates that within the GGH, the City of Peterborough has the highest median age of all single-tier municipalities in the Outer Ring with a designated urban growth centre and all regional municipalities in the GTA.

With a significantly higher proportion of senior citizens, it is not surprising that Table 7 also indicates that Peterborough is characterized by considerably smaller average household sizes than much of the GGH. However, because of the way density is measured in the Growth Plan, with smaller average household sizes, Peterborough will be required to plan for the construction of more residential units per hectare than most other municipalities in the GGH in order to achieve the same Growth Plan density target.

Table 6: ***Percentage of the population aged 65 and over, 2006***

Peterborough (City)	**19.4%**
Ontario	13.6%
GGH	12.8%
Inner Ring	12.2%
Outer Ring	14.7%

Source: 2006 Census

Table 7: ***The City of Peterborough's demographics, average household size, and units per hectare required to achieve 50 people per hectare compared to the Outer Ring and the GTA***

Variable	**City of Peterborough**	**GGH Outer Ring Avg***	**GTA Avg****
Median age of the population	41.7	36.6	37.3
% of the population aged 15 and over	84.7	80.7	79.6
Average household size (PPU)	2.3	2.6	3.0
Total units/ha required to achieve 50 people/ha @ PPU	21.7	19.4	16.5
*includes City's of Barrie, Brantford, Guelph, Waterloo, Cambridge, and Kitchener			
**includes Region's of Halton, York, Peel, and Durham			

Source: 2006 Census

2.2.2 Student population

Peterborough is home to Trent University and Sir Sandford Fleming College. Consequently, Peterborough has a large number of post-secondary students living within the City relative to the City's overall population. Presently, about 5,550 students move to Peterborough to attend Trent University during the school year. Of this figure, about 1,050 students live in on-campus residences while approximately 4,500 students live within the community. At Sir Sandford Fleming College, approximately 2200 students relocate to Peterborough during the school year. Overall, between the two institutions, approximately **7,750** students move into the City during the school year. This is approximately 10% of the City's 2006 Census population.

Despite housing a large student population, those students who move to Peterborough for the school year are not counted in the census as Peterborough residents because their permanent residence is considered to be in the community from which they have moved. Therefore, because the Growth Plan intends to monitor progress towards achieving the intensification and density targets based on Census data, any residential projects that are built for student purposes, or residential units that are rented by students who are from outside of Peterborough, will not be counted as progress towards these targets. This presents an additional challenge that the City faces in attempting to achieve the Growth Plan's intensification and density targets.

2.2.3 Immigration

Compared to other areas in the GGH, the City of Peterborough receives little international immigration. As of 2006, only 10% of the City's residents were born outside of Canada whereas almost 36% of the GGH population were of international origin (See Table 8). Of all municipalities in the GGH, only the City of Kawartha Lakes, Haldimand County and Peterborough County have a lower proportion of immigrant residents.

Table 8: ***Immigration status of all residents in the City of Peterborough, the Province of Ontario and the GGH and its Inner and Outer Rings, 2006***

	Peterborough (City)	Ontario	GGH	Inner Ring	Outer Ring
Non-immigrants	89.4%	70.8%	63.3%	56.6%	83.5%
Immigrants	9.9%	28.3%	35.5%	42.1%	15.9%
Non-permanent residents	0.6%	1.0%	1.2%	7.9%	0.6%

Source: 2006 Census

Furthermore, of those immigrants who call Peterborough home, almost 78% of them arrived in Canada prior to 1991. Since 1991, Peterborough's rate of immigrant settlement has consistently been lower that the average for the Province, the GGH and both the Inner and Outer Rings of the GGH (See Table 9). Consequently, unlike other areas of the GGH where international immigration is, and will continue to be, a major determinant of population growth, Peterborough is not a major destination for international immigrants and therefore immigration will have a relatively marginal influence on Peterborough's population growth throughout the Growth Plan horizon.

Table 9: ***Proportion of immigrant population by period of settlement in the City of Peterborough, the Province of Ontario, and to the GGH and its Inner and Outer Rings***

	Peterborough (City)	Ontario	GGH	Inner Ring	Outer Ring
Before 1991	77.7%	55.4%	53.4%	51.2%	71.1%
1991 to 2000	12.1%	27.5%	28.7%	30.1%	17.5%
2001 to 2006	10.1%	17.1%	17.9%	18.7%	11.4%

Source: 2006 Census

2.3 Housing Tenure

Housing tenure in Peterborough is significantly different than the rest of the GGH. Specifically, the 2006 Census indicates that 36% of all dwelling units are rented, while the remaining 64% are privately owned. As Table 10 indicates, the percentage of rental dwellings in Peterborough is 6% higher than the Outer Ring and 19% higher than the average for the GTA. While the majority of this rental housing is concentrated in the Downtown and the surrounding inner city neighbourhoods, significant concentrations of rental housing are also located near the hospital, the commercial areas near Clonsilla Avenue and The Parkway corridor, and off of Talwood Drive and Hedonics Road.

With a proportionally higher population of both seniors and students, it is reasonable to expect a higher demand for rental accommodation in Peterborough compared to the GGH. Furthermore, as will be seen in Section 2.4.1, income levels in Peterborough are lower than other areas of the GGH. Therefore, more Peterborough residents seem to seek rental accommodations as an affordable alternative to home ownership compared to the rest of the GGH.

Rental accomodations tend to be associated with higher density forms of housing (e.g. duplexes, row houses, low and high rise buildings). Relative to other GGH communities, Peterborough's higher demand for rental housing may stimulate a demand for higher density housing that could help the City achieve the Growth Plan's intensification and density targets. However, as noted previously, if new higher density housing is constructed to cater exclusively to student populations or as institutionalized housing for seniors, this construction will not advance the City's progress towards achieving the Growth Plan's residential density targets. This is something that the City will need to discuss with the Ministry to ensure that this type of construction would be adequately counted.

Table 10: ***City of Peterborough's housing tenure compared to the Outer Ring and the GTA***

Variable	**City of Peterborough**	**GGH Outer Ring Avg***	**GTA Avg****
% of dwellings owned	64%	72%	83%
% of dwellings rented	36%	28%	17%
*includes City's of Barrie, Brantford, Guelph, Waterloo, Cambridge, and Kitchener			
**includes Region's of Halton, York, Peel, and Durham			

Source: 2006 Census

2.3.1 Suburban housing development

Like many municipalities in the GGH, a significant portion of Peterborough's new home development has typically been accommodated at the City's edge. Between 1986 and 2006, the three census tracts that have had the highest levels of residential construction are all located at the edge of the City (Census Tracts 9.03, 3.00, and 1.00, see Table 11 and Figure 5). Combined, these areas contain almost 45% of all residential units constructed City-wide during this period. Of all the housing constructed in these areas during the 1986-2006 period, approximately 76% was in a low density, single detached form. Based on this, Peterborough's greenfield areas have typically been used to satisfy the local housing market's demand for low density, single detached housing. As the Growth Plan is implemented, this market preference will be challenged by the need to achieve significantly greater minimum residential densities in the City's greenfield areas.

Table 11: ***The three Census Tracts with the most residential construction in Peterborough from 1986 to 2006***

Census Tract	% change in pop'n from 2001 to 2006	units constructed 1986 to 2006	% of all units built City-wide since 1986		LOW DENSITY (% of units)	MEDIUM DENSITY (% of units)	HIGH DENSITY (% of units)
9.03	46.6	1250	16.7%		78	14	8
1.00	3.0	1065	14.3%		73	12	15
3.00	14.6	1005	13.5%		78	8	15
TOTAL			**44.4%**	**AVG**	**76**	**11**	**13**

Source: 2006 Census

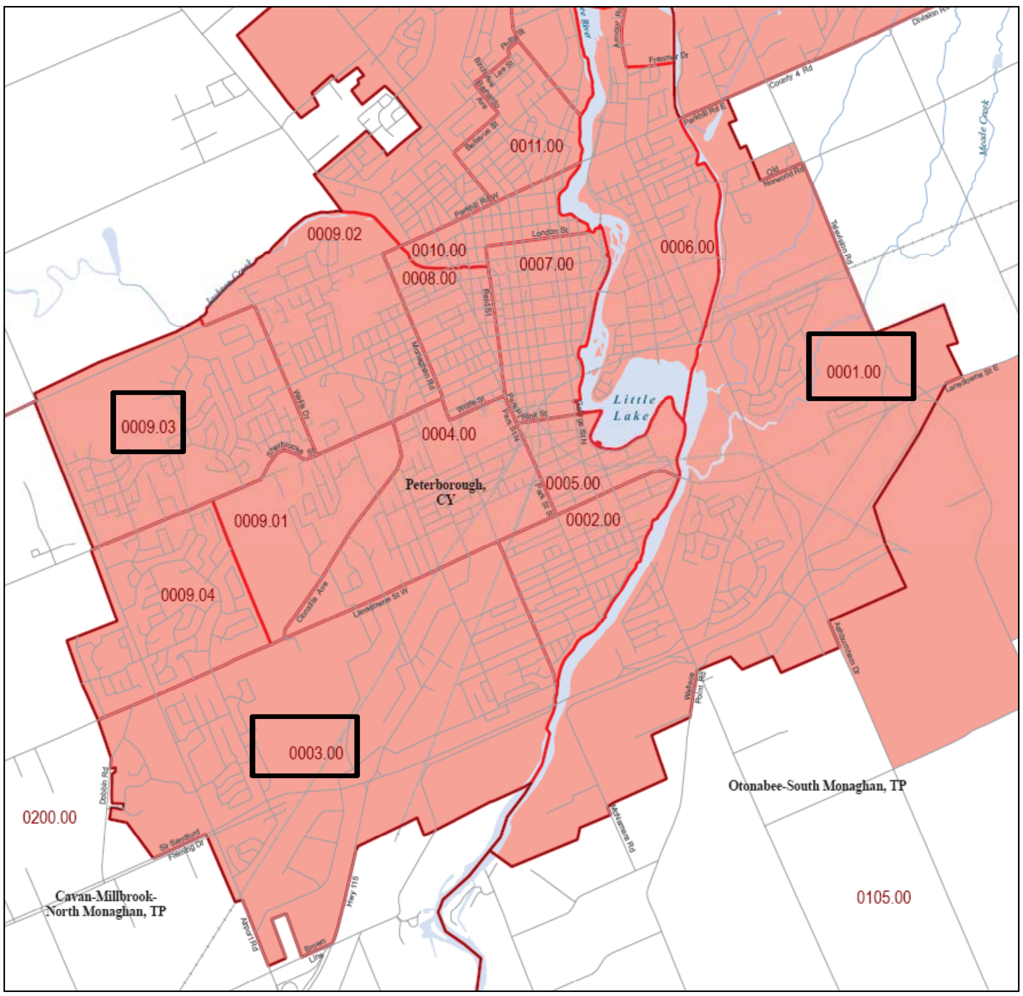

Figure 6: ***The three census tracts with the most residential construction in Peterborough from 1986 to 2006*** (Source: Statistics Canada, 2006)

Table 12 looks at the various housing forms in the City as a proportion of all dwelling units and compares these figures with similar figures for Outer Ring municipalities that have a UGC and the regional municipalities in the GTA. Overall, Peterborough has a slightly higher proportion of single-detached dwellings than the average for the Outer Ring municipalities studied. Peterborough also has comparatively fewer high-rise apartment units, and more low-rise apartment units. This suggests that Peterborough does not have a strong demand for high-rise apartment buildings and that if the City is to achieve greater densities, it will need to emphasize the construction of more low to mid-rise apartment buildings.

Table 12: ***The City of Peterborough's housing mix compared with the Outer Ring and the GTA***

Variable	**City of Peterborough**	**GGH Outer Ring Avg***	**GTA Avg****
single detached (% of dwellings occupied by usual residents)	58.7	57.2	61.1
semi detached (%)	2.6	5.7	7.0
row houses (%)	6.8	10.6	11.9
apartments- duplex (%)	6.7	4.1	3.6
apartments- fewer than 5 storeys (%)	16.8	12.5	5.4
apartments- greater than 5 storeys (%)	8.3	9.7	11.0
other (%)	0.1	0.3	0.2
*includes City's of Barrie, Brantford, Guelph, Waterloo, Cambridge, and Kitchener			
**includes Region's of Halton, York, Peel, and Durham			

Source: 2006 Census

2.4 Employment Trends

In 2006, there were approximately 40,700 fixed-location jobs within the City; up from 36,100 in 2001. Of the 4,600 jobs added during this period, the majority were created in the business services and wholesale/retail sales industries (See Table 13). Like the rest of the province, manufacturing employment has been declining in Peterborough in favour of service-oriented industries (see Table 14).

Table 13: ***The City of Peterborough's employment activity by industry, as a percentage of all jobs, from 2001 to 2006, compared with the Province of Ontario***

	Peterborough		Ontario	
	2001	2006	2001	2006
Agriculture and other resource-based industries	2%	2%	3%	3%
Manufacturing and construction industries	19%	16%	22%	20%
Wholesale and retail trade	16%	17%	16%	16%
Finance and real estate	5%	5%	7%	7%
Health and education	22%	22%	15%	16%
Business services	14%	17%	19%	20%
Other services	22%	21%	18%	19%

Source: 2001 and 2006 Censuses

Table 14: ***The City of Peterborough's employment activity by primary, secondary, or tertiary industry, as a percentage of all jobs, 1996 to 2006, compared with the Province of Ontario***

	Peterborough			Ontario		
	1996	2001	2006	1996	2001	2006
Persons in agriculture and other resource-based industries (primary)	1%	2%	2%	3%	3%	3%
Persons in manufacturing and construction industries (secondary)	20%	19%	16%	22%	22%	20%
Persons in service industries (tertiary)	79%	80%	82%	74%	75%	77%

Source: 1996, 2001, and 2006 Censuses

After looking in more detail at the nature of the jobs that are located in Peterborough relative to those located throughout the rest of the province and the GGH, it is evident that Peterborough functions as an important service center for its immediate surroundings. Compared to the rest of the GGH, Peterborough has a higher concentration of jobs in health care, education and retail (see Table 15). Given Peterborough's relative isolation from other major urban centers, it is evident that these specialized services have concentrated in Peterborough to serve the large rural area that surrounds the city. However, Peterborough's influence as a business center and employment hub has a lesser effect on other parts of the GGH where manufacturing, finance and business services are more prominent. It is also noteworthy to highlight that the size of Peterborough's manufacturing base compared to the average size for the Outer Ring of the GGH is further indication of the City's relative isolation away from the Province's major transportation routes and its major urban centres.

Table 15: ***The City of Peterborough's employment breakdown by industry compared with the Province of Ontario and the GGH and its Inner and Outer Rings, 2006***

	Agriculture and other resource-based industries	Construction	Manufacturing	Wholesale trade	Retail trade	Finance and real estate	Health care and social services	Educational services	Business services	Other services
Peterborough (City)	2%	6%	10%	4%	14%	5%	14%	9%	17%	21%
Ontario	3%	6%	14%	5%	11%	7%	9%	7%	20%	19%
GGH	2%	6%	15%	6%	11%	8%	9%	7%	21%	17%
Inner Ring	1%	6%	14%	6%	11%	9%	8%	6%	23%	16%
Outer Ring	3%	7%	18%	5%	11%	5%	9%	7%	16%	19%

Source: 2006 Census

As Table 16 indicates, many of the City's largest employers are concentrated in the health care, education, retail, and public administration fields.

Table 16: ***Top 30 employers in the City of Peterborough***

	Company	Sector	Employees
1	Peterborough Regional Health Centre	Health Care & Social Assistance	2075
3	General Electric	Electric Motors/Nuclear Components	1450
2	Public School Board	Educational Services	1370
4	City of Peterborough	Public Administration	1267
5	Sir Sandford Fleming College	Educational Services	1100
6	Ministry of Natural Resources	Public Administration	895
7	Trent University	Educational Services	700
8	PepsiCo Foods (Quaker Oats)	Cereals/Beverages/Snacks	700
9	Separate School Board	Educational Services	606
10	AON Inc.	Property Development & Management	550
11	Teleperformance	Telecom - CRM	535
12	AmeriCredit Financial Corporation	Financial Services/Credit - CRM	425
13	Minacs Worldwide	Information Services - CRM	400
14	Wal-Mart	Retail Trade	375
15	Siemens Milltronics	Process Instruments	360
16	Fairhaven	Health Care & Social Assistance	297
17	Sobey's	Retail Trade	285
18	Coach Canada	Transporting & Warehousing	284
19	ICT Group	Financial Services/Marketing	250
20	McDonald's	Food Services	246
21	Home Depot	Retail Trade	238
22	St. Joseph's at Fleming	Health Care & Social Assistance	236
23	Extendicare	Health Care & Social Assistance	230
24	Canadian Tire	Retail Trade	230
25	Numet/ODIM	Specialized Equipment Fabrication	221
26	GTS Lufthansa	Customer Support Services	220
27	Zellers	Retail Trade	204
28	Costco	Retail Warehouse	200
29	FisherCast Global	Zinc Castings/Automotive/Telcom	200
30	Loblaws	Retail Trade	190

Source: 2008 GPAEDC Community Profile, School Boards contacted directly for numbers specific to the City

2.4.1 Labour force

In 2006, Peterborough had a potential labour force (persons over 15 years of age) of 62,355 people; representing almost 85% of the City's total population. Compared to the province and other areas of the GGH, Peterborough's potential labour force represents a higher proportion of its population than most other areas subject to the Growth Plan (see Table 17).

Table 17: ***Size of Peterborough's potential labour force, 2006, as a percentage of its population, compared with the Province of Ontario and the GGH and its Inner and Outer Rings***

Peterborough (City)	84.6%
Ontario	81.8%
GGH	81.5%
Inner Ring	81.4%
Outer Ring	81.7%

Source: 2006 Census

Notwithstanding Peterborough's labour force potential, in 2006 its actual labour force was 38,350, which, when expressed as a percentage of the population aged 15 and over (i.e. Participation Rate), is proportionally smaller than the provincial and GGH average. Compared to the province and other areas of the GGH, Peterborough has a smaller proportion of its potential labour force population participating in the labour force and a higher rate of unemployment. Therefore, as shown in Table 18, Peterborough has a much lower proportion of its total population that is actually employed compared to the rest of the GGH.

Table 18: ***The City of Peterborough's participation rate, employment rate, and unemployment rate compared with the Province of Ontario and the GGH and its Inner and Outer Rings, 2006***

	Participation rate	Employment rate	Unemployment rate
Peterborough (City)	61.5%	56.5%	8.1%
Ontario	67.1%	62.8%	6.4%
GGH	68.0%	63.6%	6.4%
Inner Ring	68.1%	63.5%	6.6%
Outer Ring	67.8%	63.9%	5.7%

Source: 2006 Census

Peterborough's comparatively low participation rate can largely be attributed to the city's large population of retirees. As previously noted in Table 6, 19.4% of the city's total population is over the age of 65. Proportionally, this represents a much higher concentration of seniors than the rest of the GGH. In fact, the only other GGH municipalities with similar concentrations of seniors are Peterborough County, City of Kawartha Lakes, and Northumberland County. Looking back to 1996, similar patterns of lower labour force participation and higher unemployment were observed in Peterborough compared to the rest of the province:

Table 19: ***The City of Peterborough's employment activity from 1996 to 2006, compared with the Province of Ontario***

	1996		2001		2006	
	Peterborough	Ontario	Peterborough	Ontario	Peterborough	Ontario
Total population 15 years and over	54,535	8,539,355	56,910	9,177,300	62,355	9,819,420
In the labour force	32,790	5,661,592	34,600	6,176,323	38,350	6,587,580
Employed	28,935	5,077,670	31,790	5,800,054	35,260	6,164,245
Unemployed	3,845	583,922	2,800	376,269	3,090	423,335
Not in the labour force	21,755	2,877,763	22,290	3,000,977	24,010	3,231,840
Participation rate	60.1%	66.3%	60.8%	67.3%	61.5%	67.1%
Employment rate	53.1%	59.5%	55.9%	63.2%	56.5%	62.8%
Unemployment rate	11.7%	9.1%	8.1%	6.1%	8.1%	6.4%

Source: 1996, 2001, and 2006 Censuses

As the baby boom generation ages and people live longer, it is expected that Peterborough's high concentration of retirees will grow compared to the GGH and will keep the city's labour force participation rate lower than the provincial and GGH average throughout the course of the Growth Plan. Conversely, Peterborough also has a proportionally smaller youth population compared to the provincial and GGH averages and therefore Peterborough's labour force will grow at a slower rate than the rest of the GGH.

Table 20: ***The City of Peterborough's percentage of population under 14 years of age, compared with the Province of Ontario and the GGH and its Inner and Outer Rings, 2006***

Peterborough (City)	15.3%
Ontario	18.2%
GGH	18.5%
Inner Ring	18.6%
Outer Ring	18.3%

Source: 2006 Census

Based on this, it is expected that Peterborough's job market will grow slowly, as forecast by the Growth Plan, unless Peterborough is able to attract significant new employers to the city, or if current employers within the city are able to expand and generate significant new employment.

With respect to education, Peterborough's labour force is similar to that of other municipalities in the Outer Ring of the GGH. Specifically, Peterborough has a higher proportion of college-educated residents than both the provincial and Inner Ring and a lower proportion of university graduates (see Table 21).

Table 21: ***The City of Peterborough's level of education compared with the Province of Ontario and the GGH and its Inner and Outer Rings, 2006***

	Peterborough (City)	Ontario	GGH	Inner Ring	Outer Ring
No certificate, diploma or degree	24%	22%	21%	20%	25%
High school certificate or equivalent	29%	27%	27%	26%	29%
Apprenticeship or trades certificate or diploma	8%	8%	7%	7%	9%
College, CEGEP or other non-university certificate or diploma	22%	18%	18%	17%	20%
University certificate or diploma below the bachelor level	3%	4%	5%	5%	3%
University certificate, diploma or degree	15%	20%	22%	25%	14%

Source: 2006 Census

Overall, 48% of Peterborough residents aged 15 and over have completed some form of post-secondary education. This level of educational attainment is slightly above the average for the Outer Ring of the GGH (47%) but below the provincial (51%) and Inner Ring (54%) average. This education profile would suggest that Peterborough's labour force is well suited for employment in sectors that require applied skills.

Notwithstanding the skilled nature of Peterborough's labour force, employment earnings are somewhat lower in Peterborough when compared to the provincial median and the average reported median for the municipalities within the GGH (see Table 22). In 2006, the median income reported for Peterborough residents 15 and over working in full time permanent jobs was $40,046; approximately $4,700 less annually than the provincial median. When planning for growth, Peterborough's relatively low labour costs may be viewed as both an attraction to potential employers wishing to establish a business in the city and as a deterrent to potential workers considering relocating to or staying in the city. However, any deterrent that lower income levels may create for potential works may be offset by Peterborough's relatively lower cost for housing compared to most other GGH communities (see Table 23).

Table 22: ***The City of Peterborough's median income compared with the Province of Ontario and the GGH and its Inner and Outer Rings, 2006***

	Peterborough (City)*	Ontario*	GGH	Inner Ring	Outer Ring
Median earnings - Persons 15 years and over who worked full year, full time	40,046	44,748	44,439	47,332	42,703
**Actual reported median from Census*					

Source: 2006 Census

Table 23: ***Average Resale Value of Homes in Select GGH Communities, 2005 - 2007***

Census Metropolitan Area	MLS® average price ($)		
	2005	2006	2007
St. Catharines-Niagara	182,443	194,671	202,314
Brantford	182,470	198,716	209,151
Peterborough	206,270	213,469	231,596
Kitchener	220,511	237,913	252,429
Barrie	232,045	244,394	258,999
Guelph	236,140	245,676	262,186
Oshawa	252,606	258,362	265,620
Hamilton	229,753	248,754	268,857
Toronto	336,176	352,388	377,029

Source: Canada Mortgage and Housing Corporation, 2008

2.4.2 Location of work and commuting patterns

In 2006, just over 85% of the city's employed labour force reported working at a fixed location while just over 5% reported working from home. The remaining 10% either reported working at a job with no fixed address or working out of the country. As illustrated in Table 24, compared to provincial and GGH averages, Peterborough has fewer residents working from home and more residents working at a fixed location.

Table 24: ***City of Peterborough residents place of work compared with the Province of Ontario and the GGH and its Inner and Outer Rings, 2006***

	Peterborough (City)	Ontario	GGH	Inner Ring	Outer Ring
Worked at home	5.5%	7.1%	6.9%	7.5%	6.7%
Worked outside Canada	0.5%	0.6%	0.5%	0.5%	0.3%
No fixed workplace address	8.6%	9.7%	10.0%	9.6%	8.8%
Worked at usual place	85.4%	82.6%	82.6%	82.4%	84.2%

Source: 2006 Census Commuting Flow Data

For the purpose of planning to achieve the Growth Plan's minimum density targets as measured in persons and jobs, Peterborough's assumed rate of home based employment will be lower than most other areas of the GGH and therefore proportionally more of Peterborough's forecasted employment growth will need to be directed to employment designated areas than other GGH municipalities.

Looking at the nature of Peterborough residents' jobs, the City's role as a service center for the surrounding area becomes evident. This conclusion is further affirmed when looking at commuting patterns to and from Peterborough. These commuting patterns also provide further evidence of Peterborough's isolation from other areas of the GGH as described previously.

In 2006, approximately 80% of Peterborough's employed labour force that reported working at a usual location worked within the city (see Table 25). This proportion is significantly higher than both the provincial and GGH averages and has remained relatively unchanged since 2001. Additionally, of those Peterborough residents that do leave the city for work, relatively few of them work outside the County. These figures starkly contrast those reported for residents of the GGH, particularly for residents of the Inner Ring where commuting across City and Regional/County boundaries is common due to a high concentration of municipalities. These figures also exemplify Peterborough's isolation from other major urban centers in the GGH and confirm that Peterborough generally does not act as a bedroom community for employment in other municipalities.

Table 25: ***City of Peterborough residents commuting patterns compared with the Province of Ontario and the GGH and its Inner and Outer Rings, 2006***

	Peterborough (City) 2001	Peterborough (City)	Ontario	GGH	Inner Ring	Outer Ring
Worked in municipality of residence	81.2%	79.7%	60.0%	55.2%	57.1%	49.4%
Worked in a different municipality within the same county/region of residence	7.2%	7.9%	15.6%	14.9%	10.2%	28.8%
Worked in a different county/region	11.6%	12.2%	23.8%	29.8%	32.5%	21.6%
Worked in a different province	0.1%	0.2%	0.6%	0.2%	0.2%	0.2%

Source: 2001 and 2006 Censuses Commuting Flow Data

When commuting patterns are considered, Peterborough's role as a central place becomes more apparent. In 2001 and 2006, Census figures indicate that more than twice as many people enter Peterborough on a daily basis for work than leave (see Table 26).

Table 26: ***Commuters entering and leaving the City of Peterborough, 2006***

	2001	2006
Commuters Entering Peterborough	12,625	14,775
Commuters Leaving Peterborough	5,000	5,800

Source: 2001 and 2006 Censuses Commuting Flow Data

Additionally, when using commuting flow data available from the Census, it is evident that Peterborough's central place role for employment is limited primarily to its immediate surroundings. In 2001 and 2006, 90% of all jobs located within the City of Peterborough were occupied by either residents of the City or County (see Table 27). Furthermore, of the remaining 10% of jobs that were occupied by people residing beyond the county, people from the City of Kawartha Lakes, immediately west of Peterborough, occupied 50% of them.

Table 27: ***The proportion of those working in the City of Peterborough as residents of the City, Peterborough County, or from outside of the County***

	2001	2006
City Residents	65%	64%
County Residents	25%	26%
Outside County	10%	10%

Source: 2001 and 2006 Censuses Commuting Flow Data

Therefore, as a center of employment, Peterborough's labour market is almost exclusively concentrated on its residents and the residents of its immediate surroundings rather than the GGH or even the Outer Ring of the GGH. Given this role, it is anticipated that the new job growth forecast by the Growth Plan for Peterborough will provide employment primarily for residents of the City and for those people residing just outside of the city in Peterborough County and the City of Kawartha Lakes.

2.4.3 Peterborough's employment forecasts compared with the rest of the GGH

Between 2001 and 2031, both the City and County of Peterborough are forecast to provide an additional 7,000 jobs, representing an increase of 13.2%. Table 28 indicates that of all upper and single tier municipalities in the GGH, this is the lowest employment growth percentage forecast. Again, the greatest employment growth is forecast for the Region's of Halton (105.3%) and York (100%).

Table 28: ***Employment forecasts for the GGH, 2001 to 2031***

Municipality	2001 Employment	2031 Forecast Employment	Employment increase (jobs)	Employment increase (%)	% of total GGH employment growth
Halton Region	190,000	390,000	200,000	105.3%	11.5%
York Region	390,000	780,000	390,000	100.0%	22.3%
Durham Region	190,000	350,000	160,000	84.2%	9.2%
Simcoe County/City of Barrie/City of Orillia	154,000	254,000	100,000	64.9%	5.7%
Peel Region	530,000	870,000	340,000	64.2%	19.5%
City of Guelph/Wellington County	99,000	158,000	59,000	59.6%	3.4%
Waterloo Region	236,000	366,000	130,000	55.1%	7.4%
City of Hamilton	210,000	300,000	90,000	42.9%	5.2%
Dufferin County	19,000	27,000	8,000	42.1%	0.5%
City of Kawartha Lakes	20,000	27,000	7,000	35.0%	0.4%
City of Brantford/Brant County	55,000	71,000	16,000	29.1%	0.9%
Haldimand County	17,000	20,000	3,000	17.6%	0.2%
Niagara Region	186,000	218,000	32,000	17.2%	1.8%
City of Toronto	1,440,000	1,640,000	200,000	13.9%	11.5%
Northumberland County	29,000	33,000	4,000	13.8%	0.2%
City of Peterborough/Peterborough County	53,000	60,000	7,000	13.2%	0.4%
Total	**3,818,000**	**5,564,000**	**1,746,000**	**45.7%**	

Source: Growth Plan Schedule 3

2.5 Potential Drivers of Future Population and Employment Growth

The Growth Plan states that the Province will review the population and employment forecasts contained in Schedule 3 at least every five years and potentially revise the forecasts in consultation with the affected municipalities (policy 2.2.1.2). It has already been discussed and explored how the Province currently forecasts a considerably slower rate of growth for Peterborough than much of the GGH. The following will identify current or potential developments within the City and the broader region that may prove to be significant drivers of future population and employment growth in Peterborough. While the exact scale and degree to which these developments may ultimately influence the growth of the City is currently unknown, the point of this discussion will be to identify the 'potential drivers' that may ultimately cause the Province to upwardly revise its growth forecasts for the City of Peterborough during the Growth Plan planning horizon.

2.5.1 Highway 407 extension

The easterly extension of Highway 407 to Highways 35 and 115 in Clarington has the potential to influence population and employment growth in the City of Peterborough since access to a major highway is one of the key location considerations for many industries. The easterly extension of Highway 407 would offer another east-west route across the GTA to the City of Toronto, York Region, Pearson Airport, and other key GTA/GGH destinations, and would likely reduce congestion along the Highway 401 corridor through Durham Region and beyond.

Presently, Peterborough is directly served by Highway 115- a four lane divided Provincial Highway that connects the city to Highway 401 in Durham Region. While Markham is presently about 130 kilometres away from Peterborough along Highway 115 and Highway 401, the Highway 407 extension would shorten this trip to about 100 kilometres. Therefore, with the extension of Highway 407 to Highway 115/35, Peterborough would be suddenly much closer to the rapidly growing north GTA area, and this added transportation accessibility coupled with the City's comparatively cheaper land costs, could result in strong employment growth for the City. Specifically, the Greater Peterborough Area Economic Development Corporation (GPAEDC) states that the price per acre for serviced industrial land in Peterborough is currently $40,000. This is considerably lower than prices for serviced industrial land in the City's of Barrie, London, Kitchener, Cambridge, and Brantford, where prices range from $75,000 to $290,000 per acre. The GPAEDC also states that there is about 54 hectares of serviced industrial land currently available in Peterborough's two industrial parks. This means that based on the existing density of about 33 jobs per hectare in Peterborough's industrial areas, this available serviced industrial land has the potential to accommodate approximately 1,780 jobs. This suggests Peterborough's capacity to accommodate significant employment growth on its existing employment lands in the immediate future.

The opening of Highway 407 has significantly changed highway accessibility for residents and industries through the GTA, serving as a significant economic stimulus in both Peel and York Regions. The Highway 407 corridor offers a unique opportunity for business as an alternative route to distribute goods and services throughout the central GGH employment market and beyond. The construction of Highway 407 to Highway 115/35 is expected to be complete in 2013.

As seen in Figure 7, the construction of a new highway can positively influence employment growth. In the municipalities cited, each had direct access to a newly constructed highway and, as a consequence, each experienced significant employment growth immediately thereafter. Although Peterborough will not have direct access to the newly constructed Highway 407, its construction will significantly reduce travel times between Peterborough and the rapidly growing areas north and west of Toronto. Therefore, while it is clear that major highways positively influence employment growth, the extent to which the Highway 407 extension may stimulate employment growth in Peterborough is unknown, and in fact may have little or no impact because its influence will likely be greatest on the eastern GTA region that includes Oshawa, Whitby, Ajax, and Pickering.

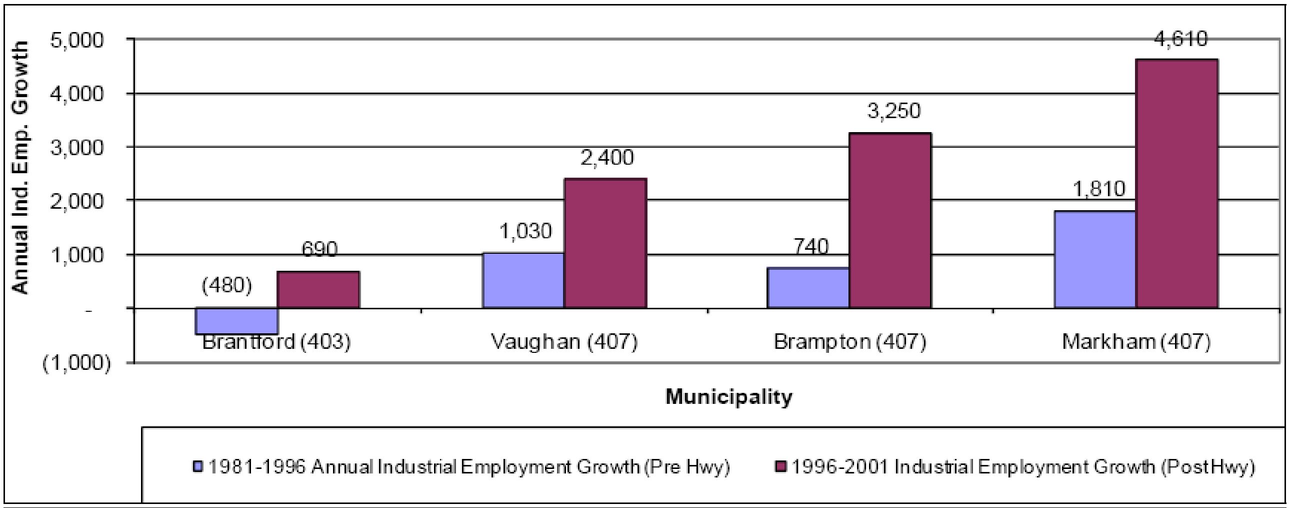

Figure 7: ***Impacts of Highway 407 and 403 on industrial development in Brantford, Vaughan, Brampton, and Markham*** (Source: *Brant County Growth Analysis Study*, prepared by Watson & Associates Economists, 2008)

In addition to potentially attracting new employment (and its associated population) to Peterborough, the Highway 407 extension may also decrease the city's geographic isolation from the rest of the GTA, making it a more desirable location for people who work in the GTA but prefer to live in a small town setting and for those who live in the GTA but commute to work in Peterborough. While Census figures discussed previously in Tables 25 and 27 indicate that the City of Peterborough has a relatively low commuting interaction with areas outside of the County, the introduction of the eastern extension of Highway 407 could change this pattern and create pressure for the City to grow beyond the forecast in the Growth Plan. As evidenced in Tables 29 and 30 Peterborough experienced modest growth in the number of people commuting from areas south and west of the City and County between 2001 and 2006.

Table 29: ***People commuting into the City of Peterborough, 2001***

Municipality	# of people
Toronto	200
Clarington	135
Oshawa	100
Whitby	30
Scugog	30
Ajax	25
Hamilton	20
Total	**540**

Source: 2001 Census

Table 30: ***People commuting into the City of Peterborough, 2006***

Municipality	# of people
Toronto	240
Clarington	205
Oshawa	160
Whitby	65
Richmond Hill	50
Ajax	45
Mississauga	40
Markham	35
Vaughan	30
Kitchener	20
Scugog	50
Total	**940**

Source: 2006 Census

2.5.2 Pickering International Airport

In 1972 the Federal Government expropriated approximately 7,350 hectares of land in northern Pickering, eastern Markham and southwest Uxbridge for a potential second international airport to serve the GTA. The lands, which have subsequently been leased to residential, farm and commercial tenants for interim use until they are required for airport purposes, are directly served by Highway 407 at its current Brock Road terminus.

In 2007, Transport Canada awarded a contract to the Greater Toronto Airports Authority (GTAA) to complete a Needs Assessment for the proposed facility. At the time, Transport Canada did not expect to make a decision regarding an airport on these lands until at least 2009. Notwithstanding that a decision has yet to be made, it is expected that a decision will be made during the current horizon of the Growth Plan and that construction of an airport, if approved, will occur prior to 2031.

Consequently, the planning for and construction of an international airport facility in northern Pickering with direct access to Highway 407 could significantly contribute to population and employment growth in the eastern GTA region between now and 2031. Based on an analysis done by the Greater Toronto Airports Authority in 2003 (GTAA), approximately 5,400 to 11,000 new jobs could be created in the airport's vicinity by 2032, depending on the rate of growth in aviation activity at the airport (the study was done based on the assumption that the airport would be completed by 2012). By 2032, the study also suggests that the airport could have an economic impact ranging from about $1.9 billion to about $4.2 billion.

While the idea of constructing an airport in Pickering has been around since the 1970s, there is considerable controversy that surrounds its construction and it is unclear whether the Pickering Airport will ever be built. However, due to the large amount of employment that such an airport would provide, it is likely that its construction would also have a positive influence on population and employment growth in the City of Peterborough. With the airport lands being directly served by Highway 407, Peterborough may be viewed as a desirable residential location for commuters who wish to live in Peterborough but work in the airport vicinity. Additionally, with a convenient transportation connection between the city and the proposed facility, Peterborough may attract industries that want to take advantage of the city's low land and labour costs while maintaining easy access to the airport for cargo shipping. Consequently, should a new international airport ever be constructed in Pickering, Peterborough may face population and employment growth pressures that are unforeseen under the current Growth Plan forecast.

2.5.3 Peterborough Municipal Airport

The Peterborough Municipal Airport, which is owned by the City and located just outside the city in the Township of Cavan Monaghan, serves as the center for a municipally-serviced industrial area that currently employs approximately 250 people and indirectly provides an additional 170 full-time equivalent jobs. Presently, the airport accommodates general/recreational flight operations, freight operations, and aircraft rebuild, support and maintenance operations and generates over $26 million annually in Gross Domestic Product.

In 2008, in response to business development opportunities, City Council approved a $7.38 million dollar Airport Development Program to transform the airport from a locally significant employment area to one of regional significance. Starting in 2008, the program calls for advancing the city's progress in implementing the Airport Master Plan to ultimately provide extended and upgraded runways and taxiways to accommodate heavier traffic, additional lands for industrial purposes, a new permanent airport terminal, and expanded facilities for industrial/commercial and recreational flight operations. A report completed by LPS Avia Consulting and presented to Council in March 2009 indicated that this investment has the potential to create about 80 full-time jobs while increasing the annual direct economic impact of the airport by $11.6 million. Additionally, in order to further maximize the regional economic benefit of the airport, LPS Avia recommended that a $21.3 million investment into extending the existing runway be made. The report suggests that this type of an investment has the potential to create an additional 300 jobs and $152 million in economic activity for the region.

Although the airport is not located within the city proper, as it grows, it will become both a significant employment area for city residents and an attraction for new residents seeking aviation-related jobs. Furthermore, should a new international airport be constructed in Pickering, it is anticipated that business development at the Peterborough airport will be enhanced, because the cost of operating Aircraft support services in Peterborough will likely be significantly cheaper than in Pickering, and Peterborough's close proximity to Pickering should prove attractive to international repair clientele flying out of Pickering.

Therefore, it is expected that expansion of the airport will enhance Peterborough's role as an economic hub for its immediate surroundings and generate population growth pressure in the city that may not be currently considered in the Growth Plan.

2.5.4 Peterborough – Toronto Commuter Railway

Between the late 1950s and 1990, Peterborough enjoyed scheduled passenger rail service to and from Toronto. However, in 1990 regular commuter rail service was cancelled. Since that time, local interest has been maintained for the resumption of passenger rail service between Peterborough and Toronto.

In the 2008 federal budget, the Canadian Government created the Public Transit Capital Trust with the purpose of supporting public transit infrastructure. Using funding from this trust, the provincial and federal governments committed to jointly undertake a study to assess the merits of re-establishing commuter rail service between Peterborough and Toronto. Although it is uncertain at this time whether Peterborough will see resumed passenger rail service to Toronto, it is anticipated that the provision of any such service would stimulate population growth in Peterborough, as commuting between Toronto, Durham Region and Peterborough would be made easier.

Currently, CP Railway operates a freight rail between Havelock and Toronto, passing through Peterborough. Known as the Havelock Subdivision, this rail was formerly used for passenger service prior to 1990. Should this railway be used for passenger service again, it would provide direct service to Peterborough, City of Kawartha Lakes (Pontypool), north Whitby, north Pickering, Markham, and Toronto. Additionally, if the Havelock Subdivision were used for passenger service, it could directly serve the proposed Pickering International Airport since the railway already bisects the federal lands that have been reserved for the airport. Therefore, should passenger service resume on the Havelock subdivision, it could stimulate both population and employment growth in Peterborough as people and businesses take advantage of the increased connectivity that the rail would provide.

2.5.5 Greater Peterborough Innovation Cluster

In 2006, the first phase of an 85-acre research and development park opened at Trent University to focus on the commercialization of applications related to regional DNA and related research. Known as the Greater Peterborough Innovation Cluster, this park is helping the Peterborough area transform itself away from the industrial mass-production economy that characterized the greater part of the 20th century and into the knowledge-based economy that will increasingly characterize the 21st century. By capitalizing on Peterborough's presence of prominent public institutions such as Trent University, Fleming College, and the Ontario Ministry of Natural Resources, the cluster intends to provide an institution that will create a synergy between these public institutions that will spawn advances in DNA related research that will also attract private businesses and organizations to the park to also benefit from this synergy and the research and innovation advances that it may provide. Therefore, the ultimate success of the Cluster will be determined by the rate at which private businesses locate to the park.

According to a study on the potential economic impact of the Greater Peterborough Innovation Cluster, the degree to which the cluster can contribute to the economic growth of the region is dependent upon two factors. First, the overall growth of the biotechnology industry will determine the level of effective demand for the types of operations that the Cluster will provide support for. Second, the Cluster's ability to facilitate the transfer of knowledge-based advances in the biotechnology field to practical, commercializable applications will have a direct impact on the potential economic growth of the Peterborough region. Moreover, if the Cluster's ability to facilitate new applications and support existing organizations grows at a rate faster than the growth in the biotechnology field in general, a greater share of biotechnology-related organizations will develop in the region.

The analysis on the economic impact of the Cluster completed by Professor Thomas Phillips of Fleming College in 2004 projected that in 20 years, the cluster could generate between $152.4 million and $352 million in economic activity directly related to the biotechnology field, representing 2,179 to 5,025 jobs. The analysis also forecast that over the same 20-year period, the construction of additional facilities for biotechnology-related activities at the cluster would contribute $144 million or 2058 job equivalents to the region. Therefore, further development at the Cluster has the potential to stimulate population and employment growth in Peterborough on a scale that the current Growth Plan forecasts may not foresee.

2.6 Peterborough is a Unique Community Within the GGH

Geographically, Peterborough is the most isolated municipality with a UGC in the GGH, located approximately 30 kilometres further away from its nearest UGC than any other pair of UGCs. Despite having a good highway connection to the GTA, this isolation is reflected in the Census data with very low commuting interaction between Peterborough and areas outside of Peterborough County and Kawartha Lakes. Because of this isolation, Peterborough has generally developed as a self-sustaining community, relying less on economic synergies with neighbouring municipalities than most other GGH municipalities in order to achieve its growth. As a consequence, Peterborough has a very different population and employment outlook than most other GGH communities.

Generally, Peterborough's rate of population and employment growth is forecast to be much slower than the other urban communities in the GGH that have a designated UGC. Proportionally, Peterborough has a much larger senior population and a much smaller youth population compared to the urbanized areas of the GGH. As a result, Peterborough has proportionally lower labour force participation and employment rates than other urban GGH municipalities and a limited ability to replace its retiring workers. Additionally, unlike other GGH municipalities, Peterborough does not rely on international immigration to grow its labour force as most immigrants to the region settle in the heavily urbanized inner ring municipalities.

From an economic perspective, Peterborough functions as the Kawartha's principal employment center with more than twice as many people commuting to Peterborough for work each day than leaving. Of those who commute to Peterborough for work, the majority resides within Peterborough County and the City of Kawartha Lakes. Looking at the nature of work performed by city residents, this central place role appears to be reinforced as Peterborough has proportionally more people working in service industries such as health care, education and retail than most other GGH municipalities.

With a more locally oriented economy, Peterborough employers generally do not compete with employers in other GGH municipalities for labour and therefore labour costs tend to be lower in Peterborough. Notwithstanding the city's lower labour costs, unemployment has tended to be higher in Peterborough than in most other GGH municipalities.

Given this analysis, it would appear that Peterborough actually has very little in common with other urban municipalities in the GGH. While approved projects such as the Highway 407 extension, the Peterborough municipal airport expansion, and the DNA cluster and proposed projects such as the Pickering airport and the Peterborough-Toronto commuter railway could facilitate economic integration with the GGH in the future, for the time being, Peterborough's outlook is defined by its self-sustaining nature.

In fact, looking at other municipalities throughout Ontario, Peterborough appears to have more in common with municipalities that are characterized as locally or regionally significant central places in that they are not integrated within a major metropolitan area.

For example, as seen in Table 31, Peterborough's population growth rate is more in line with places like London and Midland, which serve an important central place role for their immediate surroundings or region, however they are removed from the metropolitan areas of Toronto and Ottawa. On the other hand, Peterborough's population change is more positive than comparatively more isolated communities in northern Ontario where resource-based industries are declining. Overall, in Ontario, the highest rates of population growth are concentrated in communities that have a relatively high degree of economic interaction with Toronto.

Table 31: ***% Population Change for Ontario Census Metropolitan Areas (CMAs) and Census Agglomerations (CAs), 2001-2006***

Provincial Rank	Municipality	% Population Change 2001-2006
1	Barrie	19.2
2	Oshawa	11.6
3	Toronto	9.2
4	Kitchener	8.9
5	Guelph	8.2
	\	
15	Tillsonburg	5.5
16	Brantford	5.5
17	Hawkesbury	5.4
18	Midland	5.1
19	**Peterborough**	**5.1**
20	London	5.1
	\	
39	Sarnia	0.5
40	Temiskaming Shores	-0.2
41	Timmins	-1.6
42	Elliot Lake	-3.4
43	Kenora	-4.2

Source: 2006 Census Highlight Tables, Statistics Canada, 2008

Another distinguishing feature of Peterborough is its aging population. While all communities are aging in general, Peterborough has a significantly older population than most other GGH communities:

Table 32: ***Median Age of Ontario CMAs and CAs, 2006***

Provincial Rank	Municipality	Median Age
1	Elliot Lake	54.8
2	Cobourg	46.1
3	Hawkesbury	45.7
4	Kawartha Lakes	45.1
5	Collingwood	44.4
	\	
15	Pembroke	43.1
16	Cornwall	42.8
17	**Peterborough**	**42.8**
18	Sarnia	42.8
19	Kenora	42.4
20	St. Catharines - Niagara	42.1
	\	
39	Toronto	37.5
40	Guelph	36.8
41	Barrie	36.7
42	Kitchener	36.4
43	Petawawa	31

Source: 2006 Census Highlight Tables, Statistics Canada, 2008

Table 33: ***% of Population Aged 65 and over, Ontario CMAs and CAs, 2006***

Provincial Rank	Municipality	%65 and over
1	Elliot Lake	32%
2	Cobourg	24%
3	Tillsonburg	23%
4	Collingwood	21%
5	Hawkesbury	20%
6	Kawartha Lakes	19%
7	Orillia	19%
8	Owen Sound	19%
9	Brockville	19%
10	Pembroke	19%
11	**Peterborough**	**18%**
12	Temiskaming Shores	18%
13	Sault Ste. Marie	18%
14	Port Hope	18%
15	Midland	18%
	\	
38	Toronto	12%
39	Ottawa - Gatineau	12%
40	Kitchener	12%
41	Barrie	11%
42	Oshawa	11%
43	Petawawa	7%

Source: 2006 Census Highlight Tables, Statistics Canada, 2008

As can be seen in Tables 32 and 33, many of the major urban areas in the GGH have a significantly younger population than Peterborough. Comparatively, Peterborough residents are more similar in age to residents of communities outside the GGH; particularly residents of central and eastern Ontario.

As noted previously, Peterborough receives relatively few immigrants compared to most other areas of the GGH. As illustrated in Tables 34 and 35, Peterborough's immigration levels are more similar to urbanized centers outside the GGH.

Table 34: ***Immigrants as % of Total Population, Ontario CMAs and CAs, 2006***

Provincial Rank	Municipality	% Immigrant Population
1	Toronto	46%
2	Hamilton	25%
3	Windsor	24%
4	Kitchener	23%
5	Leamington	22%
	\	
25	Orillia	10%
26	Centre Wellington	10%
27	Chatham-Kent	10%
28	**Peterborough**	**9%**
29	Brockville	9%
30	Belleville	9%
	\	
39	Kenora	5%
40	Pembroke	5%
41	Hawkesbury	4%
42	Timmins	4%
43	Temiskaming Shores	4%

Source: 2006 Census Highlight Tables, Statistics Canada, 2008

Table 35: ***% of All Immigrants Residing in Ontario CMAs and CAs that immigrated between 2001 and 2006***

Provincial Rank	Municipality	% immigrated between 2001 and 2006
1	Toronto	19%
2	Windsor	18%
3	Cornwall	18%
4	Ottawa - Gatineau	17%
5	Kitchener	16%
	\	
15	Barrie	9%
16	Woodstock	9%
17	Belleville	9%
18	Stratford	9%
19	Ingersoll	8%
20	**Peterborough**	**8%**
	\	
39	Sault Ste. Marie	2%
40	Temiskaming Shores	2%
41	Port Hope	1%
42	Kenora	1%
43	Elliot Lake	1%

Source: 2006 Census Highlight Tables, Statistics Canada, 2008

Considering labour force activity (see Tables 36, 37 and 38), urban communities in the GGH tend to have higher participation and employment rates than Peterborough and lower unemployment. As with previous comparisons, Peterborough's labour force activity is more similar to that of isolated central places such as Belleville, Sudbury and Thunder Bay than they are with the GGH.

Table 36: **% of Population aged 15 and over that participates in the labour force, Ontario CMAs and CAs, 2006**

Provincial Rank	Municipality	Participation Rate (%)
1	Barrie	71.7
2	Guelph	71.7
3	Ingersoll	71.7
4	Petawawa	71.7
5	Kitchener	71.5
6	Centre Wellington	70.3
7	Ottawa - Gatineau	69.8
8	Oshawa	69.7
9	Stratford	69.4
10	Toronto	68.3
	\	
25	Belleville	63.5
26	Orillia	63.5
27	Thunder Bay	63.4
28	Sarnia	63.3
29	Greater Sudbury	63
30	**Peterborough**	**63**
	\	
39	Pembroke	59.1
40	Cobourg	58.8
41	Cornwall	58.1
42	Hawkesbury	56.9
43	Elliot Lake	38.2

Table 37: ***% of Population aged 15 and over that is employed, Ontario CMAs and CAs. 2006***

Provincial Rank	Municipality	Employment Rate (%)
1	Ingersoll	68.2
2	Guelph	68
3	Centre Wellington	67.9
4	Kitchener	67.5
5	Petawawa	67.5
6	Barrie	67.4
7	Stratford	65.9
8	Ottawa - Gatineau	65.8
9	Oshawa	65.3
10	Brantford	63.8
	\	
25	Belleville	59.7
26	Windsor	59
27	Sarnia	58.9
28	Thunder Bay	58.7
29	**Peterborough**	**58.5**
30	Greater Sudbury	58.1
	\	
39	Sault Ste. Marie	55.1
40	Cobourg	54.9
41	Cornwall	53.9
42	Hawkesbury	53.1
43	Elliot Lake	33.2

Table 38: ***Unemployment Rate, Ontario CMAs and CAs, 2006***

Provincial Rank	Municipality	Unemployment Rate (%)
1	Elliot Lake	13.1
2	Windsor	8.3
3	Sault Ste. Marie	8.1
4	Greater Sudbury	7.9
5	Thunder Bay	7.4
6	Cornwall	7.3
7	North Bay	7.3
8	Chatham-Kent	7.2
9	Kenora	7.2
10	**Peterborough**	**7.1**
	\	
39	Kitchener	5.6
40	Guelph	5.1
41	Stratford	5
42	Ingersoll	4.9
43	Centre Wellington	3.3

Source: 2006 Census Highlight Tables, Statistics Canada, 2008

With lower labour force participation and employment than the GGH and higher unemployment than the GGH, it is not surprising to find that labour costs in Peterborough are lower than in the GGH. In general, income levels in Peterborough are similar to those in small and mid-size urban communities in central and eastern Ontario that are outside the GGH (see Table 39).

Ultimately, a key theme of the Growth Plan is to build complete communities that meet people's needs for daily living throughout an entire lifetime; allowing people to live, shop, work and play within the community. According to the Growth Plan, one important aspect of a complete community is to provide residents with convenient access to an appropriate mix of jobs. In areas that fall short of this goal, people tend to commute farther for work as they need to look outside their community for work.

Table 39: ***Median income for full-time workers, Ontario CMAs and CAs. 2005***

Provincial Rank	Municipality	Median earnings, full-year, full-time earners, 2005
1	Petawawa	51536
2	Ottawa - Gatineau	50298
3	Oshawa	49684
4	Windsor	48348
5	Centre Wellington	46788
6	Sarnia	46332
7	Hamilton	46146
8	Guelph	46008
9	Barrie	45668
10	Toronto	45350
	\	
25	Tillsonburg	41623
26	North Bay	41554
27	Cobourg	41545
28	**Peterborough**	**41082**
29	Chatham-Kent	40888
30	Pembroke	40635
	\	
39	Collingwood	37611
40	Orillia	37442
41	Owen Sound	36400
42	Cornwall	35987
43	Hawkesbury	33226

Source: 2006 Census Highlight Tables, Statistics Canada, 2008

In the GGH, many of the urban areas such as Toronto, Oshawa and Barrie exhibit higher commuting distances as commuting between cities is commonplace due to their close proximity and the integrated nature of transportation system throughout much of the GGH. Notwithstanding this, the longest commuting distances are actually borne by residents in rural municipalities such as Centre Wellington and Kawartha Lakes who work in nearby urban centers.

Table 40: ***Median Commuting Distance for Workers in Ontario CMAs and CAs, 2006***

Provincial Rank	Municipality	Median commuting distance (km)
1	Centre Wellington	17.6
2	Kawartha Lakes	17
3	Norfolk	13.1
4	Oshawa	11
5	Port Hope	10.3
6	Toronto	9.4
7	Barrie	9
8	Leamington	8.5
9	Hamilton	8.3
10	Ottawa - Gatineau	8.1
	\	
20	**Peterborough**	**5.1**
21	Guelph	5
22	Brockville	4.9
23	Belleville	4.8
24	Thunder Bay	4.7
25	Midland	4.5
	\	
39	Tillsonburg	2.7
40	Collingwood	2.6
41	Stratford	2.2
42	Hawkesbury	2
43	Elliot Lake	1.7

Source: 2006 Census Highlight Tables, Statistics Canada, 2008

As seen in Table 40, Peterborough's median commuting distance is comparable to small and medium cities throughout the province that are not in the commuter shed of a major urban center (with the exception of Guelph). Commuting distances in these cities are lower because most people do not need to leave their home community for work. Arguably, these places function more as a complete community for their residents than many of the larger cities in the GGH.

Overall, looking at factors influencing Peterborough's population growth and labour force, as well as its integration with surrounding communities, Peterborough appears to share more characteristics with local or regionally significant communities outside of the GGH than it does with the GGH. In particular, communities such as Belleville, North Bay, Sudbury and Thunder Bay appear to have more in common with Peterborough than do places like Toronto, Hamilton and Kitchener. From a growth management perspective, these dissimilarities between Peterborough and the GGH could mean that major planning issues affecting the rapidly growing urbanized portions of the GGH are less relevant in the Peterborough context. Consequently, implementing Growth Plan policies in Peterborough that are really tailored to address issues that are relevant in places like Barrie, Newmarket, or Oakville may affect Peterborough's ability to maintain itself as a complete community as it exists today. With more in common with communities outside the GGH than inside, it may be worthwhile to explore Peterborough's place in the provincial Growth Plan framework should the opportunity arise. At the earliest, this could be done at such a time as a Growth Plan is prepared for eastern Ontario.

3.0 THE GROWTH PLAN'S INTENSIFICATION AND DENSITY TARGETS

As depicted in Figure 5 below, the City of Peterborough has the following designated areas under the Growth Plan: *Urban Growth Centre*, *Built Area*, and *Designated Greenfield Area*. Each area has a numerical target that the City is expected to incorporate into its official plan and strive to achieve as a part of the Growth Plan's overall vision of creating more compact and complete communities. This section will describe and outline what the numerical requirements for each area will mean for the future development of the City of Peterborough.

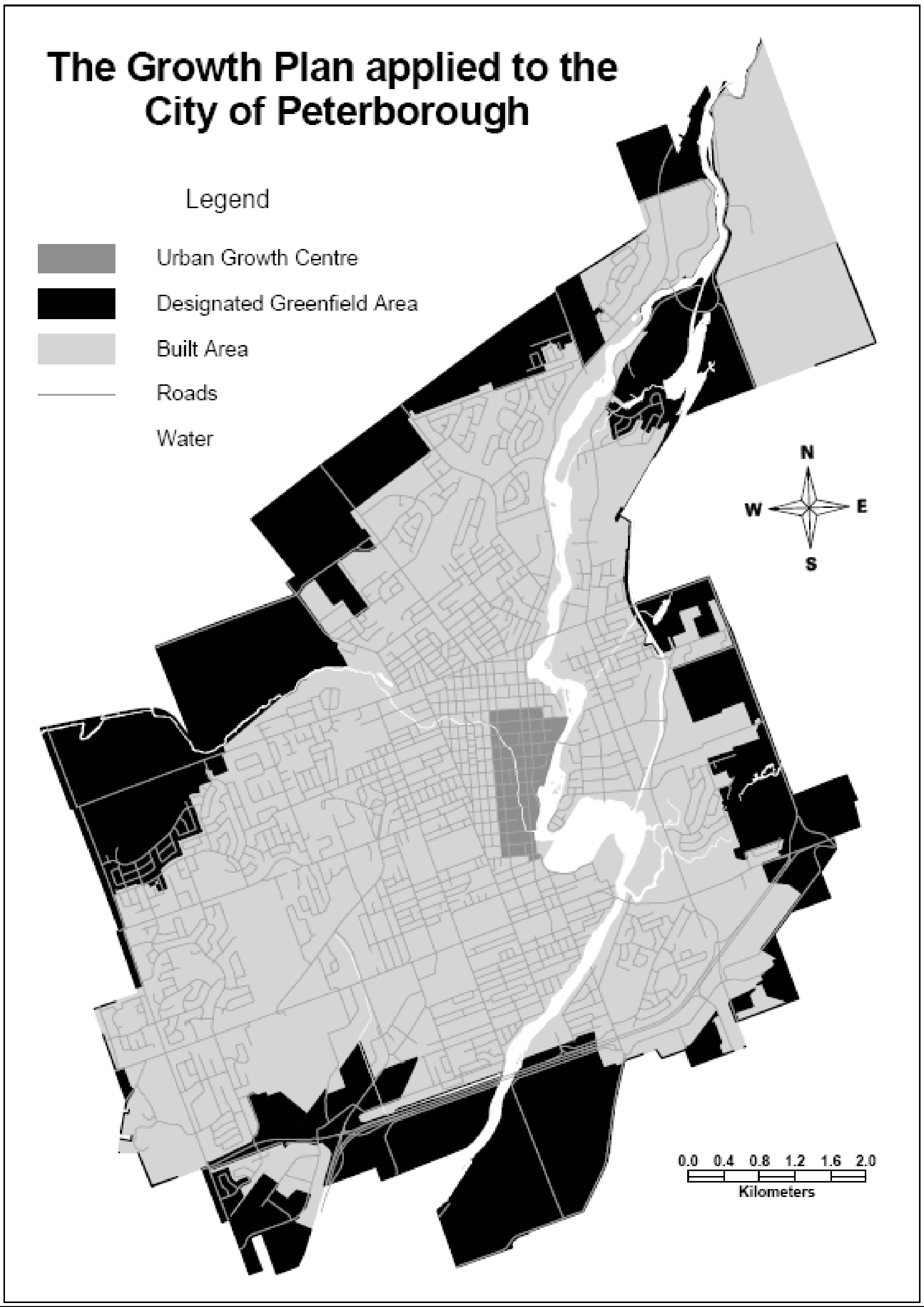

Figure 8: ***The Growth Plan applied to the City of Peterborough*** (Source: Boundaries as delineated by the Ministry of Energy and Infrastructure)

3.1 Urban Growth Centre (UGC)

According to Policy 2.2.4.4 of the Growth Plan, *"urban growth centres will be planned –*

a) as focal areas for investment in institutional and region-wide public services, as well as commercial, recreational, cultural, and entertainment uses
b) to accommodate and support major infrastructure
c) to serve as high density major employment centres that will attract provincially, nationally or internationally significant employment uses
d) *to accommodate a significant share of population and employment growth"*

Downtown Peterborough is one of 25 designated Urban Growth Centres within the Greater Golden Horseshoe. Policy 2.2.4.5c of the Growth Plan requires the Downtown Peterborough UGC to be *"planned to achieve, by 2031 or earlier, a minimum gross density target of **150 residents and jobs** combined per hectare."* Of the 25 designated growth centres, six will be planned to achieve 150 residents and jobs per hectare, fourteen will be planned to achieve 200 residents and jobs per hectare, and five, all of which are located in the City of Toronto, will be planned to achieve 400 residents and jobs per hectare. It should be clarified however that these density levels are merely targets and are not intended for municipalities to use as a strict policy requirement for directing minimum levels of annual development to the UGC. Rather, jointly with the 40% residential intensification target that is to be discussed, this target for the UGC is meant to achieve greater densities that make better use of new and existing infrastructure.

3.1.1 What is the UGC's existing density?

Peterborough's UGC is approximately 96 ha in size. Based on the 2001 Census, the Ontario Ministry of Public Infrastructure Renewal (MPIR, now the Ministry of Energy and Infrastructure – MEI) determined the existing density of Peterborough's UGC to be about 100 residents and jobs per hectare. Based on this estimate and on the existing 24:76 residents to jobs ratio also provided by the Ministry, there are currently 2,304 residents and 7,296 jobs located in the Downtown Peterborough UGC.

Table 41: ***Density of the Downtown Peterborough UGC, according to the MPIR, based on the 2001 Census***

Area	Residents	Jobs	R + J	R:J ratio	R + J/ha	Needed for 150 R+J/ha	% R + J increase
96 ha*	2,304	7,296	9,600	24:76**	100**	4,800 R + J	50%

*Area calculated using GIS software and reflects the final boundary of Peterborough's UGC as indicated by MPIR in *"Size and Location of Urban Growth Centres in the Greater Golden Horseshoe"* (Fall 2008).
** Provided by MPIR in "*Proposed Size and Location of Urban Growth Centres in the Greater Golden Horseshoe*" (Spring 2008). The numbers for 'Residents' and 'Jobs' were then calculated based on this provided information.

3.1.2 Achieving the 150 r+j/ha target if currently at 100 r+j/ha

If Peterborough's UGC has an existing density of 100 residents and jobs per hectare, an additional 4,800 residents and jobs are required to reach an average density of 150 residents and jobs per hectare. This represents a 50% increase over the present situation. Of the 14,300 new residents and jobs forecast for the City of Peterborough between 2006 and 2031, the City will need to plan for approximately **33%** of this growth to occur in the UGC if this target is to be achieved by 2031. Therefore, the redevelopment and revitalization of Downtown Peterborough will need to be a central part of the City's future growth strategy. Specifically, Peterborough's new Central Area Master Plan that was released in draft form to the public in December 2008 has the potential to play a significant role in stimulating the redevelopment and revitalization of the Downtown Peterborough UGC on a scale envisioned by the Growth Plan.

Presently, approximately 12.7 ha of the UGC is considered to be floodplain associated with Jackson Creek and/or the Otonabee River. Because the UGC encompasses the historic core of the city, much of this floodplain land is currently developed for urban uses.

When considering development or redevelopment in floodplain areas, municipal planning decisions must be consistent with Policy 3.2.1 c) of the Provincial Policy Statement, 2005 (PPS) which reads:

> "*Development and site alteration shall not be permitted within areas that would be rendered inaccessible to people and vehicles during times of flooding hazards, erosion hazards and/or dynamic beach hazards, unless it has been demonstrated that the site has safe access appropriate for the nature of the development and the natural hazard."*

Notwistanding this policy, Policy 3.1.3 a) of the PPS continues:

> *"Despite policy 3.1.2, development and site alteration may be permitted in certain areas identified in policy 3.1.2:*
>
> *a) in those exceptional situations where a Special Policy Area has been approved. The designation of a Special Policy Area, and any change or modification to the site-specific policies or boundaries applying to a Special Policy Area, must be approved by the Ministers of Municipal Affairs and Housing and Natural Resources prior to the approval authority approving such changes or modifications."*

Should the City strictly adhere to PPS policy 3.1.2, approximately 13% of the city's UGC would be unavailable for future redevelopment or intensification thus placing greater pressure on the remainder of the UGC to accommodate even higher development densities in order to achieve the overall UGC target of 150 residents and jobs.

However, Section 3.4.5 of the City's Official Plan establishes a Special Policy Area for the Jackson Creek Floodplain that allows for the consideration of development in the downtown area. The City will need to seek provincial clarification regarding the applicability of the existing Special Policy Area in light of PPS policy 3.1.3.

3.2 Built Area

The Built Area of the City of Peterborough is the area that had already been developed as of June 16, 2006. Policy 2.2.3.1 of the Growth Plan legislates that *"by the year 2015 and for each year thereafter, a minimum of **40 percent** of all residential development occurring annually within each upper- and single- tier municipality **will** be within the built-up area."* This residential development will be measured in terms of all units being constructed annually through intensification, which can be defined as development that occurs within the Built Boundary. This is a strict policy requirement of the Growth Plan that the province mandates all upper and single-tier municipalities within the GGH to achieve.

3.2.1 What does the 40% intensification target mean for Peterborough?

Based on the Growth Plan's population projections and on 2006 Census data, approximately 8,800 new residential units will be required within the City by 2031. Of these units, approximately 3,500 will need to be built within the Built Area boundary at an average of approximately 139 units per year for the entire planning period. This would leave the remaining 60% or 5,300 units to be built in the Designated Greenfield Area at an average of 212 units per year during this time. Between now and 2021, it is expected that annual population and housing growth will be slightly stronger than this overall average. However, beyond 2021, it is forecast that Peterborough's growth rates will slow down.

When the Built Boundary was established, a conscious decision was made to include lands in registered plans of subdivison that had not yet been fully built out. Consequently, from January 2006 to October 2008, about 385 residential units have been constructed on lands within the Built Boundary that were either vacant or already approved for development at the time the Boundary was established. This construction accounts for approximately 85% of all residential development that has occurred within the built boundary since 2006. Moving forward, as the supply of registered unbuilt lots within the Built-up Area is depleted, it will become increasingly difficult to achieve the 40% intensification target; the focus of development in within the Built Boundary will need to shift from vacant parcels to redeveloping and intensifying parcels with existing development. Consequently, a policy framework to encourage and provide incentives for the redevelopment of existing under-utilized buildings and sites will be required.

3.2.2 Developing an intensification strategy

In order to most effectively accommodate residential intensification within the Built Boundary, policy 2.2.3.6 of the Growth Plan requires all municipalities to *"develop and implement through their official plans and other supporting documents, **a strategy and policies** to phase in and achieve intensification and the intensification target."* As a result, Peterborough's Official Plan will need to develop strategies and designate areas to accommodate this intensified growth. The Growth Plan envisions directing intensification to specially designated intensification areas, nodes, corridors, and major transit station areas. An accompanying policy framework that establishes incentives for growth to occur in these areas may also be required. This will help direct where intensification is to occur within the City while also ensuring that the annual intensification target is met. Deciding which areas of Peterborough to specifically designate as intensification areas will be determined through a public consultation process.

Policy 2.2.3.7 of the Growth Plan states *"all intensification areas will be planned and designed to –*

a) cumulatively attract a significant portion of population and employment growth
b) provide a diverse and compatible mix of land uses, including residential and employment uses, to support vibrant neighbourhoods
c) provide high quality open spaces with site design and urban design standards that create attractive and vibrant places
d) support transit, walking and cycling for everyday activities
e) generally achieve higher densities than the surrounding areas
f) *achieve an appropriate transition of built form to adjacent areas"*

Additionally, in accordance with Policy 2.2.3.6 h) the City must establish minimum density targets for any planned intensification areas consistent with the planned transit service level for the area and any transit-supportive land-use guidelines established by the province.

Section 2.2.5 of the Growth Plan pertaining to major transit station areas and intensification corridors reads as follows:

1. Major transit station areas and intensification corridors will be designated in official plans and planned to achieve -
   a) increased residential and employment densities that support and ensure the viability of existing and planned transit service levels
   b) a mix of residential, office, institutional, and commercial development wherever appropriate
2. Major transit station areas will be planned and designed to provide access from various transportation modes to the transit facility, including consideration of pedestrians, bicycle parking, and commuter pick-up/drop-off areas
3. Intensification corridors will generally be planned to accommodate local services, including recreational, cultural, and entertainment uses.

3.3 Designated Greenfield Area (DGA)

Policy 2.2.7.1 of the Growth Plan legislates, *"new development taking place in designated greenfield areas will be planned, designated, zoned, and designed in a manner that –*

a) contributes to creating complete communities
b) creates street configurations, densities, and an urban form that support walking, cycling and an early integration and sustained viability of transit services
c) provides a diverse mix of land uses, including residential and employment uses, to support vibrant neighbourhoods

d) *creates high quality public open spaces with site design and urban design standards that support opportunities for transit, walking, and cycling"*

Peterborough's DGA is the area that is within the City limits but outside of the Built Area boundary. Policy 2.2.7.2 of the Growth Plan states that *"the Designated Greenfield Area of each upper- and single-tier municipality will be planned to achieve a minimum density target that is not less than **50 residents and jobs** combined per hectare."* This target will be measured across the entire developable area of the DGA, excluding any natural features noted in Policy 2.2.7.3 of the Growth Plan that are identified in either the Official Plan or any applicable provincial plan. The total net area of Peterborough's DGA is approximately 1443 hectares (with areas identified in Schedule C of the OP as Natural Areas and Floodplain as well as zoned Hazard Lands excluded). Therefore, the capacity of Peterborough's entire DGA based on the Growth Plan target of 50 residents and jobs/ha is **72,150 residents and jobs.** However, because the City is only forecast to grow by about 14,300 people and jobs between 2006 and 2031, its DGA will not achieve full build out at this density for several decades beyond the 2031 Growth Plan planning horizon. Therefore, to remain compliant with the Growth Plan target, the City will need to ensure that the new areas of the DGA that develop, are planned to do so at an average density of 50 residents and jobs per hectare.

3.3.1 Lower employment densities require an increase in residential density to achieve the target of 50 residents and jobs per hectare

Peterborough's DGA contains both employment areas and residential areas. Research on existing employment densities in the City indicates that Peterborough's industrially designated areas have typically developed at an average density of about 33 jobs per hectare while its commercially designated areas that are located outside of the downtown UGC have developed closer to the target, at an average of about 43 jobs per hectare. Outside of the UGC, the average combined density of all industrial and commercial areas is approximately 36 jobs per hectare. It will therefore be assumed that the vacant commercial and industrial lands in the City will achieve similar densities at full build out.

Currently there are approximately 20 hectares of land zoned 'Commercial' and 193 hectares of land zoned 'Industrial' in the DGA. Applying an average of 33 jobs per hectare to the industrially designated lands and 43 jobs per hectare to the commercially designated lands indicates that approximately 7,230 jobs can be accommodated on employment lands in the DGA. Therefore, if no additional land is designated for employment purposes in the DGA, the existing employment lands could provide the equivalent of **5 jobs per hectare** across the entire DGA.

With the 213 hectares of employment lands removed from the total DGA area of 1443 hectares, there are 1,230 hectares of land remaining in the DGA for residential purposes. Research on population-serving employment in residential areas (e.g. local commercial, schools, churches, work-at-home, etc.) and reported Census employment figures for persons with no fixed work location indicates that there is currently about **2.5 jobs per hectare** in all areas currently designated 'Residential' in the City as identified on Schedule A of Peterborough's OP. This means that approximately 3,075 jobs will be accommodated on the 1,230 hectares that are to be used for residential purposes. Over the entire DGA, this is equal to an average of about **2 jobs per hectare**.

At full build out, these two employment assumptions combined indicate that the DGA can accommodate 10,305 jobs, which is about 7 jobs per hectare over the entire DGA. Therefore, in order to achieve the overall target of 50 residents and jobs per hectare for the DGA, approximately 61,845 people will need to be accommodated at an average density of at least **43 people per hectare over the entire DGA**.

3.3.2 Residential land requirements in the DGA to 2031

The Growth Plan forecasts that about 13,000 additional people will live in the City of Peterborough by 2031. Additionally, Census trends show that the average household size (PPU) continues to decline as people have fewer children and as the baby boom generation ages. Based on the City's projected population growth, an assumed continuation in the decline of household size City-wide, and the 40% residential intensification rate as discussed previously, it is estimated that approximately 5,300 residential units will be constructed in the DGA between 2006 and 2031, accommodating approximately 12,100 people. This DGA population will be comprised of both new residents to Peterborough and existing residents relocating within the city as household size (persons per unit) declines across the city.

To accommodate the approximately 12,100 people locating to the DGA by 2031 at an average density of 43 people per hectare (employnig the assumptions discussed in Section 3.3.1), about **250 hectares of residential land will be required**. This means that in order for Peterborough to develop at the provincially mandated density target, **<u>only 250 hectares of the 1,230 hectares that are currently available for residential purposes in its DGA will be required by 2031</u>.** The City must therefore strategically decide whether policies are required to guide which portions of its DGA will be developed for residential purposes over the Growth Plan planning horizon to 2031.

3.3.3 What is the traditional residential density of Peterborough's greenfields?

A study of recent subdivision activity in the City indicates that the traditional residential density of Peterborough's greenfields is about 29 people or 13 units per hectare (see Table 42). These low-density residential areas are predominantly made up of single-detached homes and are reflective of the strong market demand for lower density housing forms in the City of Peterborough. Table 42 specifically indicates that of the total number of proposed units in the recent subdivisions studied, nearly 75% were in a low-density housing form.

Table 42: ***Residential densities of Peterborough's recent subdivisions (2000-2008)***

Low Density units	Medium Density units	High Density units	Total units	Area (ha)	Units per hectare	People per hectare at 2.3 PPU
2,568	949	0	3,517	275	13	29

Source: City of Peterborough Planning Division

3.3.4 What housing mix will be required to achieve the Provincial density target in the DGA?

To achieve an average density of least 43 people per hectare over the entire DGA, fewer single detached homes and more multi-unit residential developments that include row housing and multi-storey buildings will need to be built. This will likely require the City to reduce the proportion of the residentially designated area that is zoned for single and semi-detached dwellings and to increase the proportion of medium and high-density developments accordingly. It may also be necessary to establish minimum density requirements for certain residential designations.

Achieving a combined average density of 50 residents and jobs per hectare in the DGA as the Growth Plan legislates will require a sharp break in the traditional residential development patterns of the City. Significantly more multi-unit residential developments will need to be constructed and it remains to be seen whether market demand will be sufficient for these types of higher density housing forms in the City's DGA. Of all the numerical requirements and targets that the Growth Plan sets out for the UGC, the Built Area, and DGA, it is the density target for the DGA that the City of Peterborough may have the greatest challenge achieving.

4.0 OTHER KEY REQUIREMENTS OF THE GROWTH PLAN

The Growth Plan is written to achieve a vision of making the GGH into a city region of global significance based on a strong economy, a clean and healthy environment and social equity. As listed in Section 1.2.2 of the Growth Plan, its guiding principles are to:

- *"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."*

To achieve the vision, the Growth Plan contains four main themes of policies which are: planning where and how growth will occur; planning how infrastructure will be provided to accommodate growth; planning for the protection and conservation of natural and cultural resources; and, planning for the co-ordinated implementation of the Growth Plan.

Some policies in the Growth Plan, such as the requirement for density targets, present an immediate challenge to Peterborough's established land use planning framework and therefore much attention has been given to these policies already in this document. However, there are a number of other policies in the Growth Plan that will also have an effect on planning in Peterborough that also need to be considered as the City prepares to amend its Official Plan to implement the Growth Plan. This section will discuss these requirements and how they may affect planning in Peterborough.

4.1 Where and How to Grow

In addition to establishing minimum density targets for the UGC and the DGA, requiring minimum annual levels of intensification and the designation of intensification areas in the Official Plan with minimum density targets as discussed previously, the Growth Plan provides a number of other policies that are intended to complement these numerical requirements.

4.1.1 Secondary Suites

Policy 2.2.3.6 j) requires municipalities to encourage the creation of secondary residential suites throughout the built-up area. For Peterborough, the addition of secondary suites to existing dwellings, where appropriate, or the allowance for secondary suites in all new residential development, may represent a significant means for achieving the density target in the DGA and the annual intensification requirement in the built-up area. This Growth Plan Policy is further supported by Section 24.1 of the Planning Act which prohibits the appeal of official plan policies adopted to permit secondary suites except where such policies are adopted as part of a five-year comprehensive official plan review.

4.1.2 Settlement Areas and Boundary Expansions

In order to ensure that the GGH accommodates its anticipated growth in a compact, efficient way, Policy 2.2.2.1 i) requires that development be directed to settlement areas and, more particularly, that major development be directed to settlement areas that offer municipal water and wastewater systems (Policy 2.2.2.1 j). Furthermore, the plan prohibits the establishment of new settlement areas. As a single-tier urban settlement, Peterborough has been assigned specific population and growth forecasts therefore the City does not have the task of assigning growth to settlements. However, these policies will be particularly relevant to areas of Peterborough County that surround the city as they prevent the creation of new settlements in the County that could draw major growth away from the city.

Over time, as development is accommodated within settlements, the need may arise for settlements to be expanded. Because achieving a more compact pattern form of urban growth is central to Growth Plan, the Plan provides strict policies to limit the future expansion of settlement area boundaries.

Specifically, Policy 2.2.8.2 states:

> "*A settlement area boundary expansion may only occur as part of a municipal comprehensive review where it has been demonstrated that –*
>
> *a) sufficient opportunities to accommodate forecasted contained in Schedule 3, through intensification and in designated Greenfield areas, using the intensification target and density targets, are not available:*
>
> > *i. within the regional market area, as determined by the upper- or single-tier municipality, and*
> >
> > *ii. within the applicable lower-tier municipality to accommodate the growth allocated to the municipality pursuant to this plan*
>
> *b) the expansion makes available sufficient lands for a time horizon not exceeding 20 years, based on the analysis provided for in Policy 2.2.8.2a*
>
> c) *the timing of the expansion and the phasing of development within the designated Greenfield area will not adversely affect the achievement of the intensification target and density targets, and the other policies of this Plan."*

Although it has already been indicated that the City of Peterborough has sufficient land to accommodate significant residential and employment growth for several decades beyond the Growth Plan planning horizon, this policy may affect settlements that immediately surround the city in Peterborough County. Based on the Growth Plan's definition of a Regional Market Area, areas outside of the city but within the County may be within the city's Regional Market Area. If this is the case, the City may need to monitor any settlement boundary expansion proposals in the County to ensure that they do not inhibit the City's ability to implement the Growth Plan.

4.1.3 Intensification Areas

In addition to requiring the designation of intensification areas and the establishment of minimum density targets for such areas, the Growth Plan also requires municipalities and the province to facilitate intensification through the use of infrastructure investment and other implementation tools and mechanisms (Policy 2.2.3.8). This requirement reinforces the provincial commitment to direct infrastructure funding to projects that support the Growth Plan and establishes the municipal responsibility to do the same. In addition to prioritizing infrastructure investment, one potential tool for the City to achieve this is to adopt a Community Improvement Plan (CIP) under Section 28 of the Planning Act that would give the City a wide range of powers to acquire and sell land, construct, repair or improve buildings on land acquired pursuant to a CIP, and provide grants or loans to persons who are undertaking projects that implement a CIP, subject to cost eligibility. In order to comply with the Growth Plan and to ensure that areas designated for intensification will have the infrastructure necessary to accommodate such growth, the Official Plan will need to ensure infrastructure investment is prioritized to facilitate intensification.

4.1.4 Designated Greenfield Areas

Growth Plan Policy 2.2.7.6 requires municipalities to "*develop and implement official plan policies, including phasing policies, and other strategies, for designated greenfield areas to achieve the intensification target and the density targets*" of the Plan. Accordingly, because Peterborough has a significantly larger DGA than will be required to accommodate development to 2031, the Official Plan will need to contain policies that ensure that greenfield development occurs in a logical sequence that complies with the Growth Plan targets throughout the lifespan of the Growth Plan; doing so will ensure that greenfield development serves to optimize infrastructure investment and create compact, complete communities.

4.1.5 Employment Lands

The Growth Plan considers the GGH to be the economic engine of Canada. To ensure the region's economy continues to grow, the Plan states that municipalities in the GGH must plan to have sufficient employment areas available to sustain any future employment growth. According to the Plan, an employment area is an area "*designated in an official plan for clusters of business and economic activities including, but not limited to, manufacturing, warehousing, offices, and associated retail and ancillary facilities.*"

Policy 2.2.6.1 requires that *"an adequate supply of lands providing locations for a variety of appropriate employment uses will be maintained to accommodate the growth forecasts in Schedule 3."* Based on the analysis provided in Section 3.3.1, Peterborough has more than enough vacant land zoned for employment purposes in the DGA alone to accommodate all of the forecasted employment growth to 2031. However, that analysis, nor the Growth Plan employment forecast, contemplates what appropriate mix of employment lands will be required for the long term as required by Policy 2.2.6.2 a).

As part of the City's Official Plan Amendment to implement the Growth Plan, the City will need to establish policy aimed at strategically planning for employment. Such policy will need to reflect the language of Growth Plan Policy 2.2.6.2 which reads:

> *"Municipalities will promote economic development and competitiveness by –*
> *a) providing for an appropriate mix of employment uses including industrial, commercial and institutional uses to meet long-term needs*
> *b) providing opportunities for a diversified economic base, including maintaining a range and choice of suitable sites for employment uses which support a wide range of economic activities and ancillary uses, and take into account the needs of existing and future businesses*
> c) *planning for, protecting and preserving employment areas for current and future uses ensuring the necessary infrastructure is provided to support current and forecasted employment needs";*

as well as direct major office and institutional development to the UGC, major transit station areas and transit corridors in accordance with Policy 2.2.6.4. Additionally, because the Growth Plan does not consider lands designated for retail commercial purposes as an employment area, the Official Plan will need to consider retail land needs separate from employment land needs. Presently, the City is undertaking a Retail Market Analysis to assess the need for retail floor space into the future. The results of this study will form the basis for any Official Plan amendments concerning the designation of additional retail commercial lands.

In recent years, retail trade has gained prominence as an employment sector in Peterborough with the introduction of a number of big-box style retailers and the current expansion of Lansdowne Place mall. Like in many other GGH municipalities, the rise of big box retailing has created pressure to convert industrial and office commercial lands for retail purposes. As shown in Policy 2.2.6.2 c) above, municipalities must protect and preserve employment areas. In order to protect employment lands, the Growth Plan provides strict policy governing the conversion of such lands to non-employment uses. Specifically, Policy 2.2.6.5 reads:

> *"Municipalities may permit conversion of lands within employment areas, to non-employment uses, only through a municipal comprehensive review where it has been demonstrated that –*
> *a) there is a need for the conversion*
> *b) the municipality will meet the employment forecasts allocated to the municipality pursuant to this Plan*
> *c) the conversion will not adversely affect the overall viability of the employment area, and achievement of the intensification target, density targets, and other policies of this Plan*

d) there is existing or planned infrastructure to accommodate the proposed conversion
e) the lands are not required over the long term for the employment purposes for which they are designated
f) cross-jurisdictional issues have been considered
For the purposes of this policy, major retail uses are considered non-employment uses."

For Peterborough, it's particularly important to note that major retail uses are considered non-employment uses for this policy. Therefore, municipalities no longer need to face pressure to convert employment lands for major retail purposes. Furthermore, if the City of Peterborough chooses to adopt Official Plan policies governing the conversion of employment land, the Planning Act provides further support by prohibiting the right to appeal municipal decisions regarding amendments to remove land from employment areas.

Policy 2.2.6.9 encourages municipalities to designate and preserve lands in the vicinity of existing major highway interchanges, ports, rail yards and airports for employment purposes. In Peterborough, this principle has already been implemented as the City's two major industrial areas are located adjacent to a major highway and the City has focused infrastructure investment to grow business opportunity at its municipal airport, located just outside the city.

Policy 2.2.6.10 legislates that, *"in planning lands for employment, municipalities will facilitate the development of transit-supportive, compact built form and minimize surface parking."* As noted previously, Peterborough has sufficient vacant land zoned for employment uses to accommodate the forecast employment growth to 2031. Therefore, it is unlikely that additional employment lands will need to be planned in the near future. However, as a strategic document, the Official Plan will need to ensure that any new employment areas comply with this policy.

Additionally, the city will need to ensure through the site planning approval process that new development in existing employment areas will implement the principles of this policy. This may require amendments to the City's current Official Plan policies regarding site plan control in order to incorporate design standards for sites within employment areas that meet the provincial expectation of transit-supportive form, which the Growth Plan defines as:

> *"Makes transit viable and improves the quality of the experience using transit. When used in reference to development, it often refers to compact, mixed-use development that has a high level of employment and residential densities to support frequent transit service. When used in reference to urban design, it often refers to design principles that make development more accessible for transit users, such as roads laid out in a grid network rather than a discontinuous network' pedestrian-friendly built environment along roads to encourage walking to transit; reduced*

setbacks and placing parking at the sides/rear of buildings; and improved access between arterial roads and interior blocks in residential areas."

4.2 Infrastructure to Support Growth

Section 3 of the Growth Plan provides policies aimed at coordinating infrastructure provision with land use planning in order to provide a more efficient, compact urban form and those facilities required to serve the needs the population's needs throughout their lifetime. The policies in this section focus primarily on transportation, water and wastewater systems, and community infrastructure.

4.2.1 Transportation

Generally, the Growth Plan requires that municipalities plan their transportation system to:

- *a) provide connectivity among transportation modes for moving people and for moving goods*
- *b) offer a balance of transportation choices that reduces reliance upon any single mode and promotes transit, cycling and walking*
- *c) be sustainable, by encouraging the most financially and environmentally appropriate mode for trip-making*
- *d) offer multi-modal access to jobs, housing, schools, cultural and recreational opportunities, and goods and services*
- e) *provide for the safety of system users."*(Growth Plan Policy 3.2.2.1)

In order to do this, the Plan requires municipalities to coordinate transportation system planning with land use planning and transportation investment. Although virtually all municipalities coordinate transportation investment with land use planning, it has typically been done in a way that anticipates and responds to development rather than stimulating development. Moving forward, in order to comply with the Growth Plan, municipalities will need to take a more proactive approach to investing in transportation infrastructure so as to influence where development will occur. This need is clarified in Policies 3.2.3.1 and 3.2.3.2 a) which read:

"3.2.3.1. *Public transit will be the first priority for transportation infrastructure planning and major transportation investments.*

3.2.3.2. *"All decisions on transit planning and investment will be made according to the following criteria:*

- a) *using transit infrastructure to shape growth, and planning for high residential and employment densities that ensure the efficiency and viability of existing and planned transit service levels;".*

Additionally, municipalities are required to develop and implement transportation demand management (TDM) policies in their official plans to reduce trip distance and time, and increase the modal share of alternatives to the automobile. Although the City of Peterborough currently undertakes TDM planning, such policies are not directly included in the Official Plan. Consequently, the Official Plan will need to be amended to incorporate policies related to TDM.

Part of ensuring that TDM goals are achieved will involve planning for the inclusion of pedestrian and cycling networks both within existing communities and new development and developing linkages between neighborhoods, transit stations, and intensification areas. Sections 5.6 and 5.7 of the Official Plan contain policies regarding the city's cycling and pedestrian networks. Through implementation of the Growth plan, the Schedules implementing these Official Plan policies may need to be amended to emphasize the creation of linkages throughout the community.

From a goods movement perspective, the Plan requires municipalities to work with the province and applicable agencies to co-ordinate and optimize goods movement systems, improve corridors for moving goods across the GGH, and promote multi-modal goods movement, including the development of freight-supportive land-use guidelines. Furthermore, in order to facilitate goods movement into and out of the city's significant areas of employment, the City will need to establish priority routes for goods movement and alternative routes connecting to the provincial transportation network (Policy 3.2.4.4).

4.2.2 Water and Wastewater Systems

Peterborough is a municipally serviced community within the Lake Ontario watershed that draws its water supply from, and outlets its wastewater to, the Otonabee River. Because several municipalities rely on the river as a drinking water source and a wastewater outlet, the Growth Plan encourages the City to co-ordinate its planning for potable water, stormwater and wastewater systems with these other municipalities to ensure that water quality and quantity is maintained or improved. Presently, this level of coordination is taking place through the implementation of the Clean Water Act and is somewhat contemplated in Section 3.5 of the Official Plan. Moving forward, Section 3.5 of the Official Plan may need to be updated to incorporate co-ordination with neighbouring municipalities within the Otonabee River-shed and to strengthen the City's intent with respect to maintaining or improving water quality and quantity at its wastewater outlet.

Additionally, the Growth Plan emphasizes that permit the construction of new water and wastewater systems should only be considered where:

> *a)* *"Strategies for water conservation and other water demand management initiatives are being implemented in the existing service area;*
>
> *b)* *Plans for expansion or for new services are to serve growth in a manner that supports achievement of the intensification target and density targets;*
>
> c) *Plans have been considered in the context of inter-provincial, national, bi-national, or state-provincial Great Lakes Basin agreements. (Policy 3.2.5.4)."*

For Peterborough, this means that any expansion of the municipal water supply or wastewater treatment system (i.e. upgraded treatment capacity, water main upgrades/extensions and sewer upgrades/extensions) should only be considered if it is demonstrated that the infrastructure need will remain following implementation of conservation efforts in the affected area and that the expanded service will serve development that supports achievement of the Growth Plan's development targets. Therefore, for example, although the City has undertaken servicing studies for its growth areas as part of its secondary planning program and incorporated the servicing requirements into area-specific development charge by-laws, such upgrades should not be undertaken until such time as a conservation program has been designed for the affected growth areas and it is confirmed that the planned development in the growth area achieves the intent of the Growth Plan. Even at the Plan of Subdivision approval level, the Growth Plan implies that servicing should not be expanded for new development until the City is satisfied that the development achieves the Growth Plan development targets.

Additional policies related to the phasing and timing of water and wastewater infrastructure construction/expansion may need to be included in Section 7.1 of the Official Plan to comply with the Growth Plan.

4.2.3 Community Infrastructure

The Growth Plan defines community infrastructure as "*lands, buildings, and structures that support the quality of life for people and communities by providing public services for health, education, recreation, socio-cultural activities, security and safety, and affordable housing*." As Peterborough grows, the City must ensure that an appropriate range of community infrastructure is planned to meet the community's needs and foster a complete community. As the City plans for these needs, consultation and coordination will be required with a number of non-municipal service providers to ensure that land use and infrastructure investment decisions provide sufficient opportunities for public services. To that end, Policy 3.2.6.4 states that:

> *"Services planning, funding and delivery sectors are encouraged to develop a community infrastructure strategy to facilitate the co-ordination and planning of community infrastructure with land use, infrastructure and investment through a collaborate and consultative process."*

Policy requiring the creation and implementation of such a strategy could be included in Section 8.6 of the Official Plan by way of an amendment.

4.2.3.1 Affordable Housing

A key component of a complete community is the ability to provide residents with a variety of housing choices so as to suit their various housing needs throughout all life stages. In this regard, the Growth Plan recognizes the importance of providing adequate affordable housing opportunities throughout the GGH by requiring municipalities to establish and implement minimum affordable housing targets in accordance with Policy 1.4.3 of the PPS (2005) which reads:

> *"planning authorities shall provide for an appropriate range of housing types and densities to meet projected requirements of current and future residents of the regional market area by establishing and implementing minimum targets for the provision of housing which is affordable to low and moderate income households."*

To satisfy these requirements, Peterborough must adopt and implement a minimum affordable housing target based on the affordable housing needs of the regional market area (i.e. the City and County combined) that it will strive to achieve each year. In order to do this, the City will need to assess the affordable housing needs of the community in light of the definition of affordable that is provided in both in both the Growth Plan and the PPS (2005), which reads:

a) in the case of ownership housing, the least expensive of:

1. *housing for which the purchase price results in annual accommodation costs which do not exceed 30 percent of gross annual household income for low and moderate income households; or*
2. *housing for which the purchase price is at least 10 per cent below the average purchase price of a resale unit in the regional market area;*

b) in the case of rental housing, the least expensive of:

1. *a unit for which the rent does not exceed 30 percent of the gross annual household income for low and moderate income households; or*
2. *a unit for which the rent is at or below the average market rent of a unit in the regional market area.*

For the purposes of interpreting this definition, the Growth Plan and the PPS define low and moderate income households as:

a) in the case of ownership housing, households with incomes in the lowest 60 percent of the income distribution for the regional market area; or

b) in the case of rental housing, households with incomes in the lowest 60 percent of the income distribution for renter households for the regional market area."

Furthermore, to help municipalities achieve the Growth Plan's intensification and density targets as well as their minimum affordable housing targets and related housing goals, the Growth Plan requires upper and single-tier municipalities to develop a housing strategy. Policy 3.2.6.6 specifically states:

> *"Upper- and single-tier municipalities will develop a **housing strategy** in consultation with lower-tier municipalities, the Minister of Municipal Affairs and Housing and other appropriate stakeholders. The housing strategy will set out a plan, including policies for official plans, to meet the needs of all residents, including the need for affordable housing – both home ownership and rental housing. The housing strategy will include the planning and development of a range of housing types and densities to support the achievement of the intensification and density targets."*

Presently, Section 4.2 of the Official Plan aims to ensure that 25% of all new residential units constructed are affordable. Traditionally, this requirement has been addressed by planning for a range of housing types and densities that provide for affordable housing opportunities. Additionally, the city operates the Peterborough Housing Corporation, a non-profit company that provides social housing for approximately 820 households and affordable housing for almost 200 households, and has adopted an affordable housing strategy called Taking Charge (2001) with the goal of stimulating new affordable housing development to complement the City's social housing responsibilities.

Since 2003, with the assistance of the Canada-Ontario Affordable Housing Program (a joint provincial-federal government affordable housing funding program), the City's Housing Division has overseen the construction of 12 affordable housing projects within the city. Combined, these projects provide 366 new affordable housing units (Tables 43 and 44), representing approximately 15% of all new residential construction in the city between 2003 and 2008. With all of these projects being located within the Built Boundary, the City has used the construction of new affordable housing as one means for intensifying its built area in order to make better use of existing infrastructure resources.

Table 43: ***Affordable housing projects constructed in Peterborough since 2003***

Project Address	Units Created	Year
200 St. Luke's Ave.	60	2008
136 Anson St.	56	2008
443 Reid St.	48	2008
49 Argyle St.	16	2008
220 Edinburgh St.	4	2008
406 George St. N.	4	2008
716 Maryland Ave.	23	2007
544 McDonnel St.	4	2007
90 Murray St.	50	2005
900 Dutton Rd.	40	2005
212 Brock St.	11	2005
526 McDonnel St.	50	2003
TOTAL	**366**	

Table 44: ***Affordable Housing Production as a Proportion of All Housing Construction, 2003-2008***

Year of Building Permit Issuance	# of Affordable Units	All other Units	Affordable Units as % of Total Units	Total
2003	50	308	14%	358
2004	0	334	0%	334
2005	77	485	14%	562
2006	77	304	20%	381
2007	76	574	12%	393
2008	86	307	22%	393

Source: City of Peterborough Housing Division

In light of the Growth Plan's intensification requirements, the provision of additional affordable housing within the Built Boundary may significantly help the City achieve the Growth Plan's intensification requirement while at the same time creating more complete communities that offer residents a greater variety of housing options. However, by defining affordable based on explicit household income levels, the City may find it challenging to rely on land use planning and the free development market to provide a sufficient number of affordable housing units annually. Instead, greater emphasis may need to be placed on the City's efforts to stimulate affordable housing production through the use of financial assistance programs such as Canada-Ontario Affordable Housing Program. Just as the City's success in providing affordable housing since 2003 has relied on innovative funding solutions from senior levels of government, continued funding from senior governments will need to be secured to ensure the City can build on this success into the future.

Overall, while moving forward under the Growth Plan, Peterborough will need to review and update its current affordable housing strategy and incorporate it into an overall strategy for the provision of housing that not only meets the various housing needs and affordable housing targets of the community but also supports the Growth Plan's density and intensification targets and its overall vision of creating more complete and compact communities. This housing strategy should provide recommendations to address and implement these requirements and its outcomes should be reflected in the Official Plan and could logically be included in Section 8.2 and/or Section 4.2 of the Official Plan.

4.3 Protecting What is Valuable

The Growth Plan recognizes that the GGH features a wide variety of unique natural and cultural heritage sites and areas and other renewable and non-renewable resources that are essential for the long-term economic prosperity, quality of life, and environmental health of the region. The Plan intends to protect, manage, and preserve these assets in the most efficient way possible when planning for the future growth of the region.

With respect to natural systems, the Plan focuses on identification and protection of such systems as well as the identification of natural heritage features and areas that complement, link or enhance natural systems. Furthermore the Plan encourages the development of a system of publicly accessible parkland, open space and trails, including shoreline areas. Current City policies reflect these principles already and should need little or no revision to comply with the Growth Plan.

However, the Growth Plan does go beyond current City policy to encourage the establishment of urban open spaces such as rooftop gardens, communal courtyards, and public parks in the built-up area. The City will need to amend Chapter 6 of the Official Plan to follow this direction as well as City policies related to site plan control to allow for the inclusion of green roofs as a requirement of site plan approval.

The Growth Plan also emphasizes creating a 'culture of conservation' by requiring municipalities to establish and implement official plan policies to achieve the following objectives:

> *"a) Water conservation, including -*
> *i. water demand management, for the efficient use of water*
> *ii. water recycling to maximize the reuse of recycling water*
> *b) Energy conservation, including -*
> *i. energy conservation for municipally owned facilities*
> *ii. identification of opportunities for alternative energy generation and distribution*
> *iii. energy demand management to reduce energy consumption*
> *iv. land use patterns and urban design standards that encourage and support energy-efficient buildings and opportunities for cogeneration.*
> *c) Air quality protection, including reduction in emissions from municipal and residential sources.*
> *d) Integrated waste management, including –*
> *i. enhanced waste reduction, composting, and recycling initiatives and the identification of new opportunities for source reduction, reuse, and diversion where appropriate*
> *ii a comprehensive plan with integrated approaches to waste management, including reduction, reuse, recycling, composting, diversion, and the disposal of residual waste*
> *iii. promotion of reuse and recycling of construction materials*
> *iv. consideration of waste management initiatives within the context of long term regional planning, and in collaboration with neighbouring municipalities*
> *e) Cultural heritage conservation, including conservation of cultural heritage and archaeological resources where feasible, as built-up areas are intensified."*

(Growth Plan Policy 4.2.4.1)

Creating such policies and the programs necessary to implement them will require significant research and collaboration with affected stakeholders. Policy 4.2.4.1 a) complements policies noted previously that require the implementation of water conservation programs prior to the provision of new or expanded services while Policy 4.2.4.1 b) creates an obligation on the City to uses its facilities to champion energy conservation and set an example for other land owners in the city. Many municipalities are currently undertaking sustainable community plans to establish policies and programs that will satisfy Policy 4.2.4.1. Similar work will be required in Peterborough to achieve these requirements.

4.4 Implementation and Interpretation

The Growth Plan has a regional, inter-connected nature that requires municipalities to implement its policy directions through a co-ordinated approach. Policy 5.4.2.5 states, *"single-tier municipalities in the outer ring and adjacent municipalities should ensure a co-ordinated approach to implement the policies of this Plan."* Accordingly, the City of Peterborough should co-ordinate its approach to implementing the policies of the Growth Plan with the County of Peterborough.

Policy 5.4.1.5 clarifies that the policies and targets in the Plan represent minimum standards and that planning authorities, such as the City of Peterborough, are encouraged to implement standards that go beyond the Growth Plan requirements, unless doing so would conflict with any other policy in the Plan, the Provincial Policy Statement, or any other provincial plan. Based on this, the Plan does not allow for any municipality in the GGH to plan for development levels below the established targets. In instances where a municipality is already achieving or exceeding a mandated target, the Plan generally requires that the target for that municipality be set at the level of development that is currently being achieved.

Moving forward to 2031, the province intends to monitor implementation of the Plan in order to assess its success and prioritize provincial funding decisions. Accordingly, Policy 5.4.3.1 indicates that the province will develop a set of indicators to measure implementation of the plan. To date these indicators have not been released. Furthermore, Policy 5.4.3.3 requires municipalities to monitor and report on the implementation of the Plan within their municipality, in accordance with guidelines established by the province. Therefore, once the City has received such guidelines from the province, it will be responsible for monitoring and reporting the implementation progress within the city at a time interval established by the province.

In order to facilitate this requirement, the City will need to review its development data collection procedures once provincial guidelines are available in order to determine whether changes are required to comply with the provincial requirements.

5.0 CONCLUSION

5.1 The overall implications of the Growth Plan on the City of Peterborough

Overall, the City will be required to optimize the land within its existing built areas by strategically intensifying growth through both infill and redevelopment. This marks a significant shift in Peterborough's traditional growth patterns where the majority of its new residential development has been single-detached dwellings built at the edge of the City.

If Peterborough is to achieve the Growth Plan's intensification and density targets, more multi-unit residential developments that include row housing and multi-storey buildings will need to be constructed. The City is therefore faced with the challenge of shifting its predominantly low-density residential development patterns into a more compact, transit-supportive urban form. Also, since the Downtown Peterborough UGC needs to absorb a significant amount of the City's future growth, additional focus needs to be placed on revitalizing and redeveloping the central downtown core. The City has already taken significant steps in this direction since the implementation of the new Central Area Master Plan, which was released to the public in draft form in December 2008, will play a key role in developing policies and programs to focus development in the UGC.

While achievement of the Growth Plan's density and intensification targets will not be easy, it is important to remember that the Growth Plan is intended to change the way that land use planning has been traditionally done in the GGH. With aims of limiting urban sprawl so that we can make better use of our existing natural resources, the Growth Plan does not anticipate, promote, or facilitate more of the same. The effective implementation of the Growth Plan however, will entirely depend on the extent to which the various stakeholders involved with community development that include developers, politicians, planners, architects, and the general public- embrace it.

6.0 APPENDIX: RESEARCH METHODS, SOURCES, AND ASSUMPTIONS

This appendix will outline the research methods and data sources that were used to provide the major findings that are presented in Section 3.0 of this background report. It will also provide a basis for the key assumptions that the findings presented in this section are based upon. Overall, this research depended upon GIS spatial analysis to assess the data that was obtained from various sources such as the City of Peterborough AMANDA database, the YLM Peterborough Business Directory, and the GPAEDC Community Profile. This appendix will be organized under the two headings: 'Research Methods and Data Sources' and 'Major Assumptions.'

6.1 RESEARCH METHODS AND DATA SOURCES

Under the sub-headings of 'Land Area Analysis Calculations,' 'Residential Density Analysis,' and 'Employment Density Analysis,' this section will outline the analysis methods and data sources that were used to generate the findings that are presented in Section 3.0 of this report.

6.1.1 Land Area Analysis Calculations

Land area calculations were an important part of this research. All land area calculations were made using GIS software and this allowed for analysis of Peterborough's existing residential and employment densities. They also provided the basis for certain employment and population assumptions and projections.

'UGC Analysis' land area calculations

The land area of the Downtown Peterborough UGC was calculated to be 96 hectares. This calculation was based on the final boundary of the UGC as identified by the MPIR. This calculated area was used to determine the additional growth that would be needed in this area to achieve the 150 residents and jobs per hectare target.

'DGA Analysis' land area calculations

The entire area of Peterborough's DGA was calculated to be 1,869 hectares. To reflect how the Growth Plan will measure progress towards achieving the 50 residents and jobs per hectare target, all areas zoned as Hazard Land and all areas identified as Natural Areas and Floodplain in Schedule C of the Official Plan were removed from this gross area calculation. On this basis, the net area of Peterborough's DGA was calculated to be 1,443 hectares. This net area was then used to determine how many people and jobs would ultimately need to locate in the DGA for the 50 residents and jobs per hectare target to be achieved.

'Employment Density Analysis' land area calculations

In order to know Peterborough's existing employment densities, the areas of various employment areas in the City were calculated. To simplify this analysis, the area of all land currently zoned 'Commercial', 'Industrial', and 'Public Service' was assessed. The area for each, which is represented in 'Sheet 1: City of Peterborough Employment Density Analysis,' was calculated in a few different ways:

1. All land currently zoned Commercial, Industrial, and Public Service was calculated. This became the ‘zoned area.’
2. In an attempt to eliminate vacant land within each area calculation in order to more accurately reflect existing employment densities in the City, the area of the parcels in each zoning class for which there was an employment count was calculated. This became the ‘developed area.’
3. Since the ‘developed area’ calculations only reflect the area of specific land parcels and not their surrounding roads and other non-developable features, a ‘gross developed area’ was calculated for each zoning class by adding 40% to the ‘developed area.’ This was meant to take into account undevelopable features such as roads that were not captured in the ‘developed area’ calculations. Employment density calculations based on ‘gross developed area’ were therefore considered to be the most accurate measure of Peterborough’s existing employment densities and they were used as the basis for employment projections in the DGA.

‘DGA Employment Forecast’ land area calculations
In order to forecast the amount of jobs that will ultimately locate to Peterborough’s DGA, the area of land currently zoned as ‘Commercial’ and ‘Industrial’ was first calculated. It was determined that there is currently 20 hectares zoned Commercial and 193 hectares currently zoned Industrial in the DGA. The existing employment densities determined for Peterborough’s developed industrial areas and its commercial areas outside of the UGC were applied to these respective areas as a way to forecast the number of jobs that may ultimately locate to the employment areas of the DGA at full build out.

Separate calculations were completed to forecast the amount of employment that may locate to the residential areas of the DGA at full build out. For this, it was first determined that there were 2,528 hectares of land within the City currently designated ‘Residential’ on Schedule A of its Official Plan. The number of jobs located within this area was then calculated and a ‘jobs per hectare’ figure for all areas currently designated Residential in the City was determined. This figure was then used as a basis to forecast the number of jobs that may ultimately be accommodated in the residential areas of the DGA at full build out.

Overall, these calculations were done to help determine the amount of people, in addition to these forecast jobs, that would be required in the DGA for the overall 50 residents and jobs per hectare target to be achieved.

Table A1: ***City of Peterborough Employment Density Analysis***

Zoning	Jobs	Zoned area (ha)*	Gross zoned area (ha)**	Developed area (ha)***	Gross developed area (ha)**	Jobs/gross zoned ha	Jobs/gross developed ha
Commercial	16,220	292	409	185	259	40	63
Industrial	14,882	484	678	324	454	22	**33**
Public Service	5,266	274	384	173	242	14	22
Total	36,368	1050	1470	682	955	25	38
Total Com. inside UGC	7,053	41	57	31	43	123	163
Total Com. outside UGC	9,292	241	337	155	217	28	**43**
Total Com. + Ind. outside UGC	24,174	725	1015	479	671	24	**36**

*Zoned area calculations are based on zoned land parcels and do not include features such as roads

**Gross area calculations add 40% to the net area to take into account undevelopable features such as roads

***Developed area represents all land parcels for which there was an employment count

6.1.2 Residential Density Analysis

The 'Residential Analysis' aspect of this research sought to understand where the City of Peterborough currently stands with respect to achieving the residential densities envisioned in the Growth Plan. This analysis required the creation of a 'unit count database.'

Creating the 'unit count database' for the 'Residential Density Analysis'

In order for the existing residential densities of Peterborough (in terms of people per hectare) to be studied, it was necessary to first know and spatially map out the distribution of residential units throughout the City. This information for the entire City was retrieved from the City of Peterborough AMANDA database that has its unit count data populated by MPAC (Municipal Property Assessment Corporation). These are the general steps that were taken to modify the raw data so that any analysis conducted on it would be as accurate as possible:

1. A spreadsheet of a unit count for all active properties in Peterborough was retrieved. This spreadsheet included the addresses and roll numbers of all the properties so that they could be mapped.

2. The unit counts of all the properties were assessed for any errors. It was found that since the AMANDA unit count data is populated by MPAC data, the unit counts in the spreadsheet were not all current. This resulted in many recent residential developments not being captured. These cases were isolated and a proper unit count for each project and address was manually entered into the spreadsheet. In order to provide accurate unit counts for the addresses that had errors, the building permit and planning application folders in AMANDA were consulted. In select cases, it was also necessary to contact the owner of the residential development directly.

3. After these errors had been fixed, the data was exported into the GeoMedia GIS software and mapped. Here it was realized that the unit count provided by MPAC had included both residential and commercial units. In an attempt to separate the residential units from commercial units, all units contained within certain areas where residential development was not permitted or it was known not to exist were removed. This included all areas zoned for Industrial, Public Service, and Open Space purposes, all areas zoned C2, C3, C4, and C7, all properties zoned C6 that had a Commercial tax class, and several Special Policy District zones that were known not to permit any form of residential development.

4. With these commercial units removed, the data was considered to be a current and accurate reflection of all existing residential units in the City of Peterborough. Based on this data, the total number of residential units located within certain areas of the City was then calculated.

6.1.3 Employment Density Analysis

Since the Growth Plan will measure the targets for the DGA and the UGC based on both people and jobs, it was necessary to complement the 'Residential Analysis' aspect of this research with an 'Employment Density Analysis.' This employment analysis sought to determine the existing employment density for certain areas of the City so that the overall employment for specific areas such as the DGA could be projected for planning purposes.

Creating the employment database for the 'Employment Density Analysis'

The employment data that all employment analysis was based upon was retrieved from the YLM (Your Local Marketplace) Peterborough Business Directory and the 2008 GPAEDC (Greater Peterborough Area Economic Development Corporation) Community Profile. These are the steps that were taken to ensure that the employment data would be as accurate as possible:

1. YLM provided a spreadsheet of all businesses in the Greater Peterborough area. From these businesses, those without a 'Peterborough' address were deleted. About 60% of these businesses (nearly 4,000 originally) had a listed employment range (1-4, 5-9, 10-19, 20-49, 50-99, 100-249, 250-499, 500-999, or 1000-4999).

2. For those businesses with employment ranges, an average of the range was calculated and populated into the spreadsheet (e.g. the 1-4 range became 3, the 5-9 range became 7, etc…).

3. The businesses were grouped by type according to their NAICS classification. For those businesses without an employment figure, assumptions for each were made based on employment numbers for similar businesses. Using this method, an employment number was manually input into the spreadsheet for the remaining 40% of the businesses. In some cases where an employment assumption could not be made with confidence, the business or organization was contacted directly.

4. The GPAEDC 2008 Community Profile provided employment figures for the major employers in the Peterborough area. For those businesses located in the City of Peterborough, these numbers were manually input into the spreadsheet.

5. In order to be mapped, all the addresses had to be standardized (e.g. some addresses had a unit number, some did not specify what type of road (Road, Avenue, Street, etc.) or the direction (North, South, East, and West), and some addresses were not located within the City). Each address had to be looked at and changed and/or deleted if necessary.

6. Once standardized, the addresses were then modified so that there was only one employment count entered for each address (this would make it possible

to visually interpret a map representing employment counts in the City). Where there was more than one business listed at an address, the employment count for each was added together. This process also caught any businesses that may have been listed twice.

7. Now ready to be mapped, the spreadsheet was then exported into GeoMedia. The addresses in the spreadsheet were linked to an address so that they could be mapped. Nearly 400 addresses could not be mapped because they did not have a proper linking address. These addresses had to be looked at individually in order to fix the problem. For some, there was a spelling problem or the street type short form was inaccurate (e.g. Boulevard wasn't BV). For most and especially in the Downtown, there were different addresses closely located to each other that needed to be changed into the same single address in order to be mapped. The proper linking address had to be identified and the addresses had to be changed accordingly.

8. Once all addresses (1918) had been successfully linked, they again had to be sorted through and modified so that there was a single employment count for each correctly linking address.

9. The employment data for all addresses could now be mapped and analysis could now be conducted on this information. Once the employment counts were visually represented on the map, they were further assessed for any deficiencies and possible errors. Any notable errors were fixed with changes being made to the underlying database.

6.2 MAJOR ASSUMPTIONS

There are several assumptions that form the basis for many of the key research findings presented in this report. The following will attempt to justify the major assumptions.

1. Commercial areas in the DGA will develop at an average of 43 jobs per hectare

This assumption is based on the information found in 'Table A1: City of Peterborough Employment Density Analysis.' It is based on the calculated jobs per gross developed hectare density of all areas designated 'Commercial' that are located outside of the UGC. This method was chosen because it was found that the significantly higher commercial employment densities in the UGC were skewing the results for commercial employment densities across the City as a whole. This provided the grounds for a more accurate reflection of the density that commercial lands in the DGA might build out at.

2. Industrial areas in the DGA will develop at an average of 33 jobs per hectare

This assumption is also based on the information found in Table A1. It is based on the calculated jobs per gross developed hectare of all industrial areas in the City. There was no reason to exclude certain industrial areas of the City from this calculation because it was found that there was not a variation in industrial employment densities throughout the City to the same extent as for commercial employment densities.

3. Residential areas of the DGA will accommodate 2.5 jobs per hectare at full build out

In order to forecast the number of jobs that the residential areas of the DGA may ultimately accommodate at full build out, the number of jobs that currently exist in Peterborough's residential areas was calculated based on the employment data retrieved from YLM and GPAEDC as well as location of work information reported in the 2001 and 2006 Census. It was determined that there are currently about 6,270 jobs in the area that is currently designated 'Residential' on Schedule A of the Official Plan (2,528 hectares). Measured across the entire residential area, this is **2.5 jobs per hectare**. This means that approximately 3,075 jobs will be accommodated on the 1,230 hectares that are to be used for residential purposes in the DGA. Over the entire DGA, this is equal to about **2 jobs per hectare**.

4. 8,800 residential units will be constructed in the City of Peterborough from 2006 to 2031

In order to determine the land requirements for the Designated Greenfield Area as well as the amount of residential development that is to occur with in the Built Area between 2006 and 2031, it was necessary to project the total amount of residential construction occurring within the City during this time period.

Population growth projections for the City of Peterborough are prescribed in Schedule 3 of the Provincial Growth Plan and are shown in Table A3. To determine how much housing will be required to accommodate the projected population, trends in the average city-wide household size (persons per unit or PPU) were analyzed from Census data between 1961 and 2006. Since the 1970s, the City's PPU has been decreasing as people live longer and have fewer children. In the last 20 years, the rate at which the city-wide PPU has declined is slowing down. As shown in the table below, this trend has been reflected in the projected PPU for each time period. Based on the projected city-wide PPU in the table, the total amount of housing required to accommodate the projected population has been calculated for each time period as follows by dividing population by PPU.

Table A2: ***Projected Population and Housing, 2001 to 2031***

	2001	2006	2011	2021	2031	2006-2031
Total Population	71445	74898	79000	84000	88000	13102
Total Private Dwellings*	29175	31204	33475	37004	40000	8796
Average PPU	2.45	2.40	2.36	2.27	2.20	-0.20
# of new units added per period		2029	2271	3530	2996	
Average # of new units per year		405	454	353	300	
Data Source	2001 Census	2006 Census	Growth Plan	Growth Plan	Growth Plan	
* Total private dwellings occupied by usual residents						

5. <u>12,100 people will be added to the DGA by 2031</u>

i. To determine how many people will be accommodated in the Designated Growth Area between 2006 and 2031, it is first necessary to determine how much housing would be constructed in that area during the time period. To do this, the annual average amount of housing to be constructed city-wide during the time period was calculated in Table A3 as follows:

(Total Private Dwellings (Year B) – Total Private Dwellings (Year A)) ÷ # of years elapsed

For example, the average number of dwellings constructed on an annual basis between 2006 and 2011 would be:

(33,475 – 31204) ÷ 5 = 454

ii. Once the average number of residential units to be constructed annually is known, it is then necessary to determine how much of this development will be directed to the built area versus the DGA on an annual basis. The Growth Plan requires that by 2015, 40% of all residential units constructed annually be constructed within the built area. During 2006, when the Growth Plan came in to effect, approximately 39% of all residential units constructed were located within the built area.

For the purpose of calculating the number of units to be developed in the DGA, it was assumed that between 2006 and 2014, 39% of all annual residential development would occur within the built area and that, for every year thereafter, that level would rise to 40%. Based on this, the number of units to be built in the DGA between 2006 and 2031 is shown in Table A3:

Table A3: ***Residential Development in the DGA, 2006 to 2031***

Residential Development in the DGA, 2006 - 2031		
Year	# of units	% of City-wide development
2007	393	61%
2008	183	61%
2009	270	61%
2010	270	61%
2011	270	61%
2012	215	61%
2013	215	61%
2014	215	61%
2015	212	60%
2016	212	60%
2017	212	60%
2018	212	60%
2019	212	60%
2020	212	60%
2021	212	60%
2022	180	60%
2023	180	60%
2024	180	60%
2025	180	60%
2026	180	60%
2027	180	60%
2028	180	60%
2029	180	60%
2030	180	60%
2031	180	60%
TOTAL	5314	

Based on Table A3, it is assumed that approximately 5300 residential units will be constructed in the DGA between 2006 and 2031.

iii. Based on an analysis of 2006 Census data and the population projections contained in the City's *Planning Area-Specific Development Charges Study* prepared by Hemson Consulting Ltd. in 2008, it is assumed that new households in the DGA will, on average, house the following number of people per unit:

- Low Density - 2.9:
- Medium Density - 2.5: and,
- High Density - 1.7.

iv. In order to achieve the required residential density in the DGA of 50 people and jobs per hectare, it is assumed that the residentially designated portions of the DGA will be developed with the following proportion and <u>minimum</u> density of each housing form:

- Low Density – 50% at 15 units per hectare;
- Medium Density – 35% at 45 units per hectare; and,
- High Density – 15% at 90 units per hectare.

v. To determine the ultimate population of the DGA, it is necessary to determine the land area required to accommodate both residential and employment development in the DGA to 2031. To do this, City staff created an interactive model that assesses employment density, housing density and overall density of people and jobs to establish land area needs (see Table A4). The cells requiring user input are shaded in gray.

Based on the major assumptions related to employment described previously, it is assumed the development of employment lands in the DGA between 2006 and 2031 will accommodate enough jobs to establish an average density of 5 jobs per hectare over the entire DGA developable land area required to 2031. Additionally, it is assumed that the residentially-designated portion of the DGA will yield enough home based jobs and public serving jobs (i.e. schools, churches, convenience retail, etc.) to generate an average density of 2 jobs per hectare over the entire developable DGA land area by 2031.

As noted previously, industrial lands outside of the downtown UGC typically develop at an average density of 33 jobs per hectare while commercial areas outside of the UGC develop at an average density of 43 jobs per hectare. Given that there are 20 hectares of commercial land and 193 hectares of industrial land in the DGA, the DGA can accommodate up to 7230 jobs without the designation/zoning of any additional employment land. This represents an average density of 34 jobs per hectare on employment lands in the DGA.

To determine how much land will be required for employment purposes in the DGA to 2031, the model first determines how many jobs would be accommodated on employment lands and then divides that number by the average employment density that is assumed for employment lands. For example:

Total Jobs on Employment Lands =
(user entered DGA land area required between 2006 and 2031) x 5 jobs/ha

Required Employment Land Area = (Total jobs on Employment Lands) ÷34 jobs/ha

The model also determines the number of home based jobs, jobs without a fixed location, and public serving jobs based on multiplying the user entered DGA land area by the assumed 2 jobs per hectare over the entire DGA. By calculating the total number of jobs to be located in the DGA based on the assumed DGA-wide employment density, the average DGA-wide density required for residential uses is maintained at 43 people per hectare.

Based on the land area required for employment purposes, the model calculates how much land is available for residential purposes by subtracting the required employment land area from the user entered DGA land area. Housing production and population is then calculated and displayed as an average density per hectare over the user entered DGA land area by multiplying the land area available for residential uses by the assumed housing forms, densities and household sizes.

To accommodate 5300 dwelling units and achieve the overall density of 50 persons and jobs per hectare over the entire DGA, it was determined that approximately 250 hectares of residentially designated land will be required in the DGA by 2031. Consistent with typical residential development, it is assumed that 40% of this land will actually be used for public services such as roads, parks and stormwater management rather than for residential purposes. Therefore, approximatly 144 hectares of land will actually be used for housing people.

The ultimate population of the DGA was calculated by determining the number of low, medium and high density residential units that would be constructed on the net developable lands given the assumed proportion and minimum densities among the three housing types and then multiplying each unit count by the assumed PPU for that housing type. For each housing type, this is represented as:

Low Density
((50% of land area x 144 ha) x 15 units per hectare) x 2.9 PPU = 3137 people

Medium Density
((35% of land area x 144 ha) x 45 units per hectare) x 2.5 PPU = 5680 people

High Density
((15% of land area x 144 ha) x 90 units per hectare) x 1.7 = 3311 people

Therefore, in total, it is anticipated that the DGA will accommodate approximately 12,100 people by 2031. This population will consist of both new residents to Peterborough and existing residents relocating within the city as household size continues to decline city-wide.

Table A4: ***City of Peterborough Housing, Population, and Density Calculation Model***

INPUT VARIABLES		
Assumed Minimum Density	Low Density	15
	Medium Density	45
	High Density	90
Assumed Split Between Housing Forms	Low Density	50%
	Medium Density	35%
	High Density	15%
Assumed Persons Per Unit	Low Density	2.9
	Medium Density	2.5
	High Density	1.7
Assumed Density of Home Based and Local Serving Jobs over entire DGA		2
Assumed Density of Jobs on Employment Land over entire DGA (jobs/ha)		5
Assumed Gross Density of Jobs on Employment Lands (jobs/ha)		34
Assumed Gross Land Area for the DGA (hectares)		280
Assumed % of gross land area to be used for Public	Residential	40%
	Employment	25%

OUTPUT		
Gross Developable Land Area (hectares)	Residential	239
	Employment	41
	TOTAL	**280**
Net Developable Land (hectares)	Residential	144
	Employment	31
	TOTAL	**175**
Number of Residential Units	Low Density	1082
	Medium Density	2272
	High Density	1947
	TOTAL	**5301**
Number of Anticipated Residents	Low Density	3137
	Medium Density	5680
	High Density	3311
	TOTAL	**12128**
Number of Home Based and Local Serving Jobs		**560**
Number of Employment Land Jobs		**1400**
Total Number of People and Jobs in DGA		**14088**
Net Developed Density	Population on Net Residential Lands (people/ha)	84
	Jobs on Net Employment Lands	45
	Home Based & Local Serving Jobs in Net Residential Areas	4
	Housing Units on Net Residential Lands (units/ha)	37
Gross Developed Density (P2G)	Population on Gross Residential Lands (people/ha)	51
	Jobs on Gross Employment Lands (jobs/ha)	34
	Home Based & Local Serving Jobs on Gross Residential Lands	2.34
	Housing Units on Gross Residential Lands (units/ha)	22
	Population Over Entire Gross DGA (people/ha)	43.3
	Total Residents & Jobs/ha Over Entire Gross DGA	**50.3**