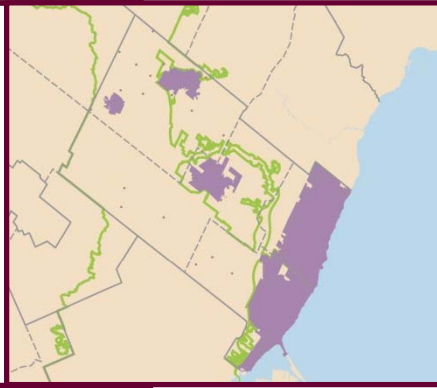


ACCOMMODATING GROWTH TO 2031



HEMSON
Consulting Ltd.

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Phase 3
Sustainable Halton Report 3.07

Halton
REGION
Prepared for Halton Region

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EXECUTIVE SUMMARY

The following report describes a set of forecasts for growth and long-term land need for the Region of Halton. The growth option presented conforms to the Provincial *Growth Plan for the Greater Golden Horseshoe* (the *Growth Plan*) and advances Regional and local municipal policy objectives. The key elements are as follows.

- The Region of Halton is forecast to accommodate a total population of 780,000 people and 390,000 jobs by 2031. These are the forecast allocations shown in Schedule 3 of the *Growth Plan* and those to which Halton must conform. Near-term forecasts have been adjusted from those in the *Growth Plan* to reflect the current recession, but the long-term forecasts, in our view, remain sound.
- To accommodate the *Growth Plan* population allocation, approximately 127,600 new housing units are required. Approximately 47,100 units are forecast to be built between 2006 and 2016 both within the built boundary and in new greenfield areas. The balance of units are forecast to be completed beyond 2016, with approximately 48,300 units forecast to be built within greenfield areas (60% of new units) and 32,200 units (40% of new units) forecast to be built within the built boundary, consistent with *Growth Plan* requirements.

To meet the 40% *Growth Plan* requirement, a significant shift in people's housing preferences from ground-related to apartment units is required, including for family-oriented units. While required for *Growth Plan* conformity, it is not yet clear how these major cultural, social and economic shifts in the housing market can be made to occur. Planning for this scale of intensification has major implications, including to municipal services. These will need to be considered carefully as the *Growth Plan* is implemented locally.

New greenfield development areas beyond those already designated in the Region (mainly North Oakville and the Milton area) are required to accommodate an additional 25,500 housing units. The density, characteristics and location of this development are analysed in the companion report *Sustainable Halton Report 3.08: Concepts for Addressing Halton Region's Land Needs to 2031* by Urban Strategies Inc.

- To accommodate the employment forecast, the Region will require approximately 1,100 gross hectares of new employment land, beyond the areas already designated within the current approved urban boundary. The employment land requirement is based on future development taking place at currently observed densities and takes into account the increasing proportion of development in the logistics and distribution sectors along the Highway 401 corridor, which are characterized by highly-automated operations with very low employment densities.

- Taken together, the residential and employment outlook combined meets the *Growth Plan* target of 50 persons and jobs per hectare for new greenfield areas. This result along with the 40% intensification means that the growth scenario presented conforms to the *Growth Plan* in respect of its key quantitative rules.
- Alternatives targets with higher than 40% intensification and a greenfield density of more than 50 persons plus jobs per hectare were analysed. These are not recommended to be pursued as there will already be significant challenges to achieve the change necessary to just meet the *Growth Plan* rules.
- The preferred growth scenario results in the distribution of growth shown in the following table.

Growth Before New Urban Areas Allocated to Milton and Halton Hills						
	Population		Employment		Activity Rate	
	2006	2031	2006	2031	2006	2031
Burlington	171,000	193,000	88,000	106,000	54%	57%
Oakville	172,000	255,000	82,000	127,000	50%	52%
Milton	56,000	175,000	28,000	88,000	51%	52%
Halton Hills	58,000	74,000	20,000	32,000	36%	45%
New Urban Areas	0	83,000	0	37,000	n/a	46%
Total	456,000	780,000	218,000	390,000	51%	52%

Source: Statistics Canada Census of Canada and Hemson Consulting Ltd.

Note: Population in the tables is total population including Census net undercoverage. Employment never includes a factor for net undercoverage. Activity rates are therefore properly calculated using the Census population, i.e. the activity rate is the employment divided by the Census population (excluding the approximately 4% undercoverage).

- The three growth concepts for the new urban areas would result in the growth distributions for Milton and Halton Hills shown in the following table.

Milton and Halton Hills Population and Employment Under Three Growth Concepts				
Concept	Location	Population	Employment	Activity Rate
1	Milton	258,000	117,000	47%
	Halton Hills	74,000	40,000	56%
2	Milton	238,000	114,000	50%
	Halton Hills	94,000	43,000	47%
3	Milton	218,000	112,000	53%
	Halton Hills	114,000	45,000	41%

Source: Statistics Canada Census of Canada and Hemson Consulting Ltd.

Note: Population in the tables is total population including Census net undercoverage. Employment never includes a factor for net undercoverage. Activity rates are therefore properly calculated using the Census population, i.e. the activity rate is the employment divided by the Census population (excluding the approximately 4% undercoverage).

I INTRODUCTION

On June 16, 2006, the Province of Ontario adopted the *Growth Plan for the Greater Golden Horseshoe* (“the *Growth Plan*”). The *Growth Plan* sets out a vision for growth in the Greater Golden Horseshoe (GGH) to 2031, including Provincial interests and directions on issues ranging from the distribution of population and employment growth, to where and how to grow; to the infrastructure needed to support growth and the protection of heritage and natural resources.

Municipalities in the GGH are required to bring their official plans into conformity with the *Growth Plan*, including the Region of Halton and its constituent local municipalities. In response to the *Growth Plan*, the Region of Halton has initiated Sustainable Halton, a process to plan for long-term growth in the Region. Building upon the *Regional Official Plan*, Sustainable Halton is to be the Region’s strategy for managing growth in Halton — forecast to represent well in excess of a 50% increase over the existing population and employment by 2031. This report is one of a series that is being prepared as part of Sustainable Halton in order to conform to the *Growth Plan* and *Provincial Policy Statement* (PPS, 2005). It describes the growth outlook for the Region of Halton and the amount of additional urban land need required to 2031.

The issue of growth and urban land need for Sustainable Halton was originally addressed in the November 2007 *Phase I Land Supply Analysis* report. As explained in the Phase I report, the key growth management choices facing the Region relate to the degree to which new housing development is accommodated within the built-up area as opposed to the expansion of the existing designated (i.e. greenfield) settlement area. Several scenarios were prepared testing different levels of intensification and, therefore, ranges of housing mixes for the Region.

Since the Phase I report was prepared, the Region and its consulting team have had the opportunity to undertake further detailed technical work and consult with the public, agencies, organized interest groups, the development community and Regional and local staff and Councils. Based on the input received and updated analyses, a preferred growth scenario has been developed and is described in this report. Although it will be a challenge to achieve, the preferred growth scenario meets the requirements of the *Growth Plan* while building on the Region’s planned urban structure.

This report is one of a series of reports being presented to Halton Regional Council in April of 2009. Other reports address a wide range of Sustainable Halton matters including, among others: the environment, agriculture, transportation, and infrastructure services. The conclusions provided in this report have taken into account the conclusions of these reports, where appropriate. At the same time, this report is also a major input to the *Sustainable Halton Report 3.08: Working Paper #2 Concepts for Addressing Halton Region's Land Needs to 2031* prepared by Urban Strategies Inc.

To assist the reader in navigating the various reports, *Accommodating Growth to 2031* primarily provides the forecast for growth and long-term land need for the Region and tests the conformity to the *Growth Plan's* quantitative rules. The Urban Strategies report takes this information and describes the location concepts for accommodating the lands within the Region. It is organized into the following chapters:

- Following this introduction, the second chapter describes the updated forecast of population and employment growth for the Region of Halton;
- The third chapter discusses the residential growth outlook, including the outlook for residential intensification;
- The fourth chapter discusses the employment growth outlook; and
- The final chapter concludes with a discussion of how the combined residential and employment growth options meet the *Growth Plan* density targets, and some of the key challenges to implementation.

II GROWTH FORECAST HAS BEEN UPDATED WITH THE MOST RECENT INFORMATION

The *Phase I Land Supply Analysis* was published in November 2007. At the time the report was prepared, the full 2006 Census information had not yet been released, particularly information related to employment. The 2007 analysis was therefore based largely on 2001 Census information. The forecasts for Sustainable Halton have now been updated with the most recent information, in particular the remainder of the 2006 Census information.

Since the fall of 2008, the national and global economies have also entered into a period of great uncertainty. Although it is not clear how long and how serious the effects of the global financial crises will be, the current recession is already having significant effects on the residential and non-residential real estate and development sectors in the GTA and within Halton Region. Reflecting the current economic conditions, somewhat slower growth can be expected over the 2006 to 2011 Census period and it is likely that the previously expected 2011 *Growth Plan* forecasts, especially for employment, will not be met. The global and national economic situation remains very fluid at time of writing, so the short-term outlook may well shift further (in one direction or the other) over the coming months.

However, the focus of Sustainable Halton is on long-range planning and, notwithstanding the near-term economic challenges, the Region still needs to plan for long-term growth. Within a broader national and global context, the GTA remains well-positioned to be a focus of growth when the economic recovery occurs and, over the long term, the GTA and the Region of Halton are expected to remain attractive locations for economic development. Over the forecast period to 2031, economic output is anticipated to continue to grow, accompanied by associated growth in employment and income as well as the resident employed labour force. The updated growth forecasts are summarized in the following tables:

- Table 1 shows the total population forecast;
- Table 2 shows the household growth forecast; and
- Table 3 shows the employment forecast.

Region of Halton Population Forecast				
	Total (000s)	Growth (000s)	Compound Annual Growth Rate	Growth Plan Forecast (000s)
1981	262	—	—	—
1986	280	18	1.3%	—
1991	323	43	2.9%	—
1996	349	26	1.6%	—
2001	390	41	2.2%	390
2006	457	67	3.2%	—
2011	513	56	2.4%	520
2016	578	64	2.4%	—
2021	646	68	2.3%	650
2026	715	69	2.1%	—
2031	780	65	1.8%	780

Source: Statistics Canada, Census of Canada and Hemson Consulting Ltd.

Note: Population is total population including Census undercoverage. The current *Halton Official Plan* population figures (not shown here) are in Census population. In order to compare the two sources, the official plan population figures need to account for a 4% Census undercoverage.

Region of Halton Household Forecast				
	Total Households (000s)	Growth		Average Household Size
		(in 000s)	Annual Rate	
1981	82	—	—	3.20
1986	90	8	1.9%	3.11
1991	106	16	3.3%	3.05
1996	118	12	2.2%	2.96
2001	134	16	2.6%	2.91
2006	157	23	3.3%	2.86
2011	179	21	2.6%	2.80
2016	204	26	2.7%	2.73
2021	231	27	2.5%	2.69
2026	259	28	2.3%	2.66
2031	285	26	1.9%	2.63
Total 2006–2031	—	128	2.4%	—

Source: Statistics Canada, Census of Canada and Hemson Consulting Ltd.

Region of Halton Employment Forecast					Table 3
	Total (000s)	Growth (000s)	Compound Annual Growth Rate	Growth Plan Forecast (000s)	
1981	101	—	—	—	
1986	119	18	3.3%	—	
1991	141	22	3.5%	—	
1996	160	19	2.6%	—	
2001	189	29	3.4%	190	
2006	218	28	2.8%	—	
2011	252	34	2.9%	280	
2016	297	45	3.3%	—	
2021	336	39	2.5%	340	
2026	362	26	1.5%	—	
2031	390	28	1.5%	390	

Source: Statistics Canada, Census of Canada and Hemson Consulting Ltd.

The *Growth Plan* requires the Region to plan for growth in accordance with the forecast allocations found in Schedule 3 to the *Growth Plan*, for 2011, 2021 and 2031. The 2021 forecasts round to *Growth Plan* numbers and the 2031 forecasts match exactly. However, for 2011, given the current economic situation, it is simply not reasonable to forecast achieving the 2011 *Growth Plan* forecast. The key matter for *Growth Plan* conformity is that the Region is planning to achieve the 2031 *Growth Plan* forecast.

The following chapters address the residential and employment growth outlook in turn, translating the overall growth outlook into an estimate of urban land need and intensification. The estimates of urban land need, like the overall forecast, have also been revised to reflect more recent information. In particular, the preferred growth scenario for Sustainable Halton includes somewhat less residential land and somewhat more employment land than originally identified in the Phase I report.

III RESIDENTIAL GROWTH OUTLOOK ANTICIPATES SIGNIFICANT INTENSIFICATION

The residential growth outlook for Sustainable Halton is prepared within the context of the *Growth Plan* policies, which seek to achieve, among other matters, a more compact urban form and to minimize greenfield expansions. The residential growth outlook presented in this chapter differs substantially from a market-based approach in that much higher levels of intensification are anticipated over the planning period than would otherwise be expected. This approach is required by the *Growth Plan* and there is no question that the resulting outlook will be a challenge to achieve.

A. RESIDENTIAL GROWTH OUTLOOK BASED ON *GROWTH PLAN* POLICIES TO ACHIEVE A MORE COMPACT URBAN FORM

There are three sets of policies in the *Growth Plan* that conclude with quantitative measures of how growth is to be accommodated in the Region:

1. Minimum density of development within the greenfield areas of the Region;
2. Minimum proportion of growth to be accommodated through intensification; and
3. Minimum density for planned development in the Region's three designated urban growth centres.

These rules provide the “envelopes” in which planning for growth must occur in Halton. The first states that the Region's greenfield areas, collectively, including any new areas designated for urban uses, must be planned to achieve a minimum of 50 persons plus jobs per gross hectare of land. The second states that, “By the year 2015 and for each year thereafter, a minimum of 40% of all residential development occurring annually within [the Region of Halton] will be within the built-up area” (2.2.3.1). This policy provides direction on the amount of development to occur within the built-up area (intensification) but not its density.

The third policy concerns the density of development in the three Urban Growth Centres (UGC) designated in the *Growth Plan*, i.e. areas where much of the 40% intensification development is expected to be accommodated. The *Growth Plan* requires that the designated UGC areas must be planned to achieve a minimum of 200 persons plus jobs per hectare.

A “designated greenfield area” is defined by the *Growth Plan* as the “area within a settlement area that is not built-up area” and in Halton’s case includes all lands in the Region’s urban designated areas outside of the built boundary (the limit of developed urban area as of June 2006, established by the Ministry of Energy and Infrastructure in consultation with the municipalities). The built boundary and the greenfield areas are shown on Map 1 on the following page.

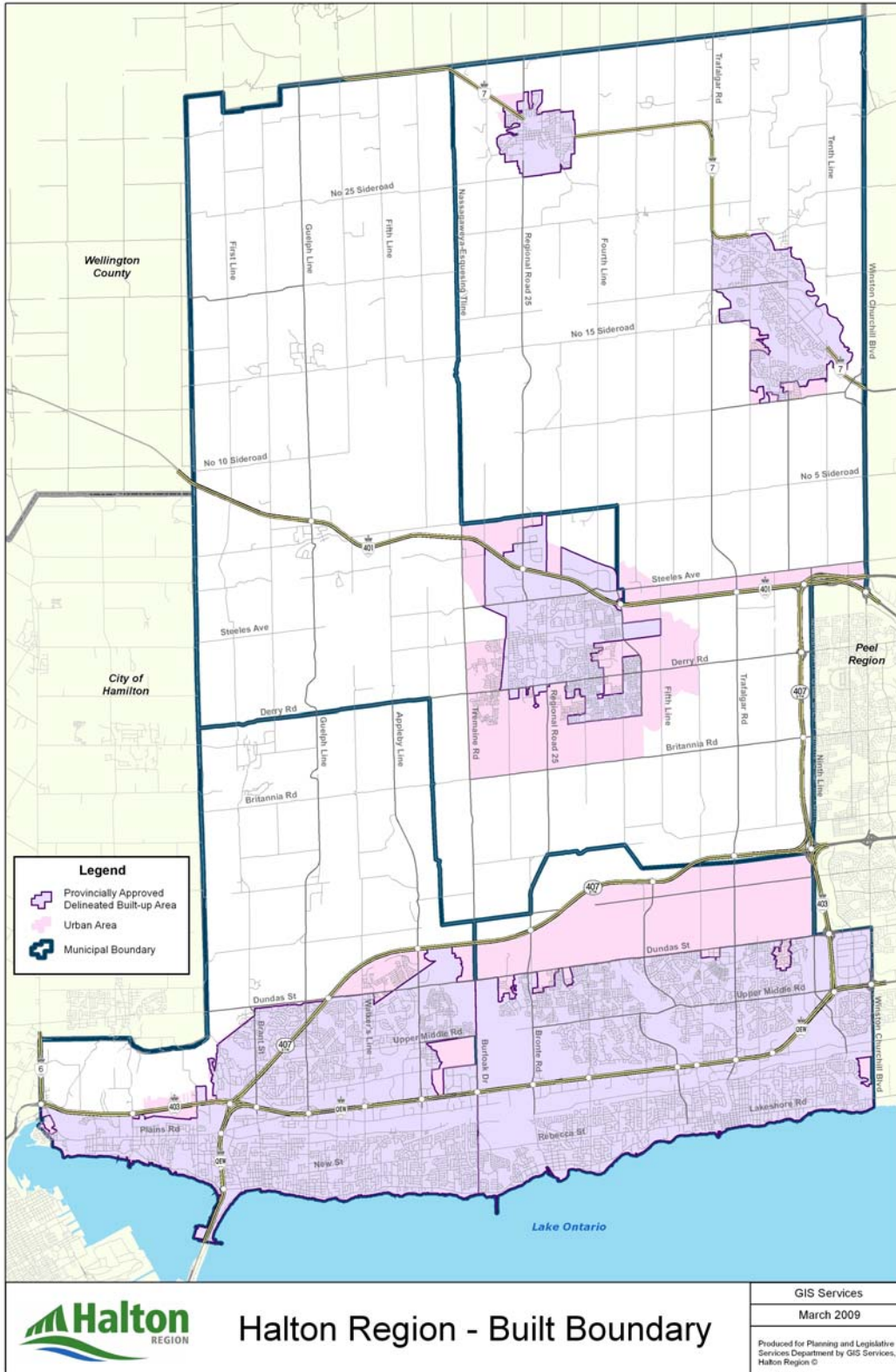
The *Growth Plan* also provides considerable direction on the manner in which municipalities should be seeking to meet these numeric targets. Referring to Section 2.2.7 of the *Growth Plan*, new greenfield communities must be planned to:

- a) Contribute to creating “complete communities”;

Complete communities are defined in the *Growth Plan* as communities meeting “people’s needs for daily living throughout an entire lifetime by providing convenient access to an appropriate mix of jobs, local services, a full range of housing, and community infrastructure including affordable housing, schools, recreation and open space for their residents. Convenient access to public transportation and options for safe, non-motorized travel is also provided”;

- b) Create “street configurations, densities, and an urban form that supports walking, cycling, and the early integration and sustained viability of transit services”;
- c) Provide “a diverse mix of land uses, including residential and employment uses, to support vibrant neighbourhoods”; and
- d) Create “high quality public open space with site design and urban design standards that support opportunities for transit, walking and cycling”.

It is in striking a balance between continued, sound, long-term land use planning and meeting both the numeric and qualitative goals of the *Growth Plan* where the challenges of conformity arise.



B. A SIGNIFICANT SHIFT IN HOUSING DEMAND IS REQUIRED TO ACHIEVE THE *GROWTH PLAN* VISION

One of the key challenges to achieving the *Growth Plan* vision is to bring about the changes in housing demand that are required to achieve a more compact urban form and limit greenfield expansion. A three-step analysis has been undertaken to estimate the amount of new urban land that is required under the *Growth Plan*:

1. Estimate the supply of residential units in both greenfield and intensification locations;
2. Identify the demand and where it needs to be met to conform to the *Growth Plan* targets; and
3. Compare supply and demand to identify amount and location of new urban lands.

1. Residential Supply Has Been Estimated Based on Work Completed by Local Municipalities

The residential land supply has been estimated based on work undertaken by local municipalities originally as part of the information updates for Regional Official Plan Amendment (ROPA 25), revised for the November 2007 *Phase I Land Supply Analysis* report and then updated for this report based on the most recent information and feedback from the consultation process:

- Within all four local municipalities, the greenfield housing unit supply potential has been updated based on the most recently available information, though little has changed in the planning for these areas since the Phase I work was completed.
- For intensification, the City of Burlington and the Towns of Oakville and Halton Hills have all completed extensive municipality-wide analyses of intensification potential. These results have been incorporated into the supply.
- The City of Burlington and the Town of Oakville have both completed extensive work in the matter of intensification within the UGCs and this has been incorporated into the supply.
- The Town of Milton is planning to undertake a full area-wide study to identify the unit potential through intensification both across the municipalities and within the UGC. However, this work will not be completed in time for the Region's *Growth Plan* conformity work. For areas outside the UGC, a significant amount of work had

been done in the past on intensification potential, some of which has been recently updated by the Region. While the new study is not completed, these are considered good estimates for the purposes of Regional planning.

- The one place where we needed to make a more general assumption in the residential supply is in the Milton UGC. Until Milton completes its detailed work on intensification, we have simply applied the *Growth Plan's* rules that a UGC should be planned for a density of 200 persons plus jobs per hectare. For the purposes of this report, the estimate shown in Table 4 is used. This may be revised at a later date to account for the Town's forthcoming intensification work. The housing unit figures in Table 4 are the total number of units, including the approximately 800 units that currently exist within the area.

Table 4	
Milton Urban Growth Centre Housing Unit Potential	
Area (ha)	118
Persons + jobs per ha	<u>× 200</u>
Total persons + jobs	= 23,600
Population at 60%	14,160
Employment at 40%	9,440
Population	14,160
Persons per Unit	<u>÷ 2.5</u>
Total Units	5,660
Unit Types (for this analysis)	
Rowhouse (20%)	1,130
Apartments (80%)	<u>4,530</u>
Total	5,660

Source: Hemson Consulting Ltd., 2009, based on the Census and available Regional and local information.

Combining the estimates of residential supply from the local municipalities with the preliminary estimate of the supply potential in the Milton UGC results in the total housing unit supply potential shown in Table 5. The supply has been adjusted to a Census Day 2006 starting point, based on housing unit completions (i.e. units under construction on Census Day 2006 are vacant for the purposes of the supply calculation) in order to ensure data consistency.

Table 5					
Identified Housing Supply Potential in Halton Region by Local Municipality (Adjusted to a 2006 base, in units)					
		Single/Semi	Row	Apt	Total
Burlington	Designated	3,310	1,010	2,180	6,500
	Intensification	<u>340</u>	<u>2,770</u>	<u>6,590</u>	<u>9,700</u>
	Total	3,640	3,780	8,780	16,200
Oakville	Designated	13,350	7,080	8,860	29,290
	Intensification	<u>1,000</u>	<u>500</u>	<u>10,600</u>	<u>12,100</u>
	Total	14,350	7,580	19,460	41,390
Milton	Designated	25,500	9,170	4,000	38,470
	Intensification	<u>0</u>	<u>1,330</u>	<u>4,450</u>	<u>5,680</u>
	Total	25,500	10,500	8,450	44,440
Halton Hills	Designated	2,520	510	180	3,220
	Intensification	<u>1,080</u>	<u>1,770</u>	<u>1,760</u>	<u>4,610</u>
	Total	3,600	2,280	1,940	7,830
Halton Region	Designated	44,680	17,770	15,220	77,670
	Intensification	<u>2,420</u>	<u>6,370</u>	<u>23,400</u>	<u>32,190</u>
	Total	47,100	24,140	38,620	109,860

Source: Hemson Consulting Ltd., 2009, based on Census and available municipal information.

Note: "Designated" refers to inventoried vacant sites within the municipality, either inside or outside the built boundary, though most would be greenfield land outside the built boundary. "Intensification" is a municipal planning approach to intensification which is primarily unit potential from infill and redevelopment. Care was taken in preparing these data to avoid double counting any properties or potential.

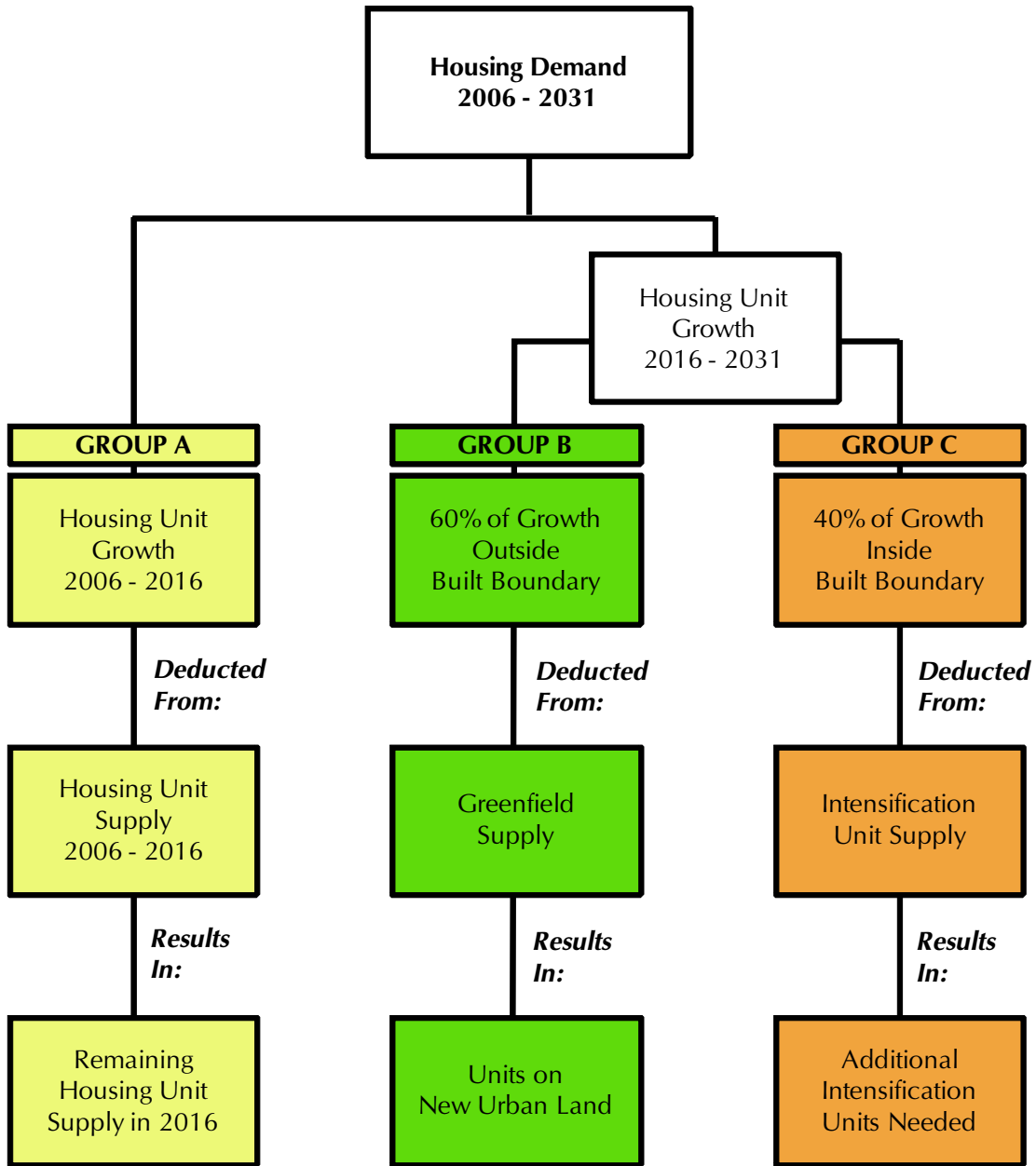
2. Distinction Must Be Drawn Between How Demand Is Accommodated within the Built Boundary versus New Greenfield Areas

Because of the way the *Growth Plan* rules are constructed, the residential growth outlook needs to be considered in three groupings, as shown in the flow chart in Figure 1 and summarized in Table 6.

- Group A is the housing unit growth that is forecast to occur between 2006 and 2016. Housing growth in this period includes growth both within and outside the built-up area. Census Day 2016 housing unit completions are used to approximate the *Growth Plan*'s 40% intensification rule start date of 2015, which is based on building permits issued.

**ILLUSTRATION OF METHOD USED TO ESTIMATE LAND
REQUIRED TO ACCOMMODATE RESIDENTIAL GROWTH**

REGION OF HALTON, 2006 - 2031



Source: Hemson Consulting Ltd., April 2009.

- Group B is the housing unit growth forecast to occur on greenfield locations, outside of the 2006 built-up area between 2016 and 2031.
- Group C is the unit growth that will be accommodated within the built-up area beyond 2016 required to meet the *Growth Plan's* 40% intensification rule.

As summarized in Table 6, the Region of Halton is forecast to accommodate a total of 127,600 new units by 2031 allocated to the three groups as shown.

Table 6			
Halton Region Housing Unit Growth, 2006–2031 Shown in Three Groupings for Analysis			
Timing	Location	Housing Units	Reference to Figure 1
Unit Growth, 2006–2016	Both within the built boundary and in greenfield areas	47,100	Group A
Unit Growth, 2016–2031	Greenfield (60% of new units)	48,300	Group B
	Within Built Boundary (40% of new units)	32,200	Group C
Totals	Unit Growth, 2006–16 Unit Growth, 2016–31 Total, 2006–2031	47,100 <u>80,500</u> 127,600	

Source: Hemson Consulting Ltd., 2009, based on the Census and available Regional and local information.

Each of these three groupings of housing unit growth are addressed separately in the following sub-sections.

3. Housing Growth in the 2006–2016 Period Includes Development Both Inside the Built Boundary (Intensification) and in Greenfield Areas

Housing unit growth over the 2006 to 2016 period is primarily the result of the building of already planned and approved developments, including development that has already occurred between 2006 and 2009 as well as the registered and draft approved plans of residential subdivisions. As shown in Table 7, growth of approximately 47,100 housing units is forecast, a large share of which will be accommodated within the Towns of Milton and Oakville.

Table 7					
Location of Housing Growth 2006–2016 (Group A in Figure 1)					
		Single/Semi	Row	Apt	Total
Burlington		2,900	2,500	2,700	8,100
Oakville	South Oakville	3,200	1,700	1,900	6,800
	North Oakville	<u>4,700</u>	<u>2,300</u>	<u>0</u>	<u>7,000</u>
	Total	7,900	4,000	1,900	13,800
Milton	Inside Built Boundary	1,300	600	700	2,600
	Outside Built Boundary	<u>13,500</u>	<u>5,400</u>	<u>400</u>	<u>19,300</u>
	Total	14,800	6,000	1,100	21,900
Halton Hills		2,000	1,100	300	3,300
Primary Study Area		0	0	0	0
Halton Region		27,500	13,600	6,000	47,100

Source: Hemson Consulting Ltd., 2009, based on the Census and available Regional and local information.

Note: Totals may not add due to rounding.

The allocation in Table 7 is based on the remaining greenfield lands in Burlington, south Oakville and Halton Hills being built out within the period to 2016. The greenfield supply in the City of Burlington is largely contained within the Alton community that is under development. Greenfield lands in south Oakville are a number of relatively small areas on the south side Dundas Street, all of which are either recently developed or under development today. Remaining areas in southern Georgetown are also assumed to be developed, notwithstanding servicing constraints that may or may not be resolved within that time frame.

Of course, no growth needs to be attributed to the Primary Study Area (PSA) in the 2006 to 2016 period. The PSA is the rural area of Halton located south and east of the principal *Greenbelt* area, not otherwise designated urban in the *Halton Region Official Plan*, within which any new urban areas will need to be located.

4. Amount of Housing Growth 2016–31 Able to Be Accommodated in Greenfield Areas Provides Basis for New Urban Residential Land Need

The amount of greenfield development that is forecast to occur beyond 2016 in the Region of Halton is based on the vacant supply in North Oakville and in the Milton area¹. Units that cannot be accommodated within the existing supply potential are allocated to the PSA. The location of greenfield housing growth in the Region of Halton is summarized in Table 8.

Table 8					
Location of Greenfield Housing Growth 2016–2031 Initial Allocation by Unit Type (Group B in Figure 1)					
		Single/Semi	Row	Apt	Total
Burlington		0	0	0	0
Oakville	North Oakville	5,000	3,200	500	8,700
Milton	Outside Built Boundary	10,200	3,400	500	14,100
Halton Hills		0	0	0	0
Primary Study Area		19,900	5,600	0	25,500
Halton Region		35,100	12,200	1,000	48,300

Source: Hemson Consulting Ltd., 2009, based on the Census and available Regional and local information.

Note: Totals may not add due to rounding.

In further work on how new residential growth can be accommodated within *Growth Plan* density targets, as described in detail in *Sustainable Halton Report 3.08: Working Paper #2 Concepts for Addressing Halton Region's Land Needs to 2031*, some of the forecast housing units within the PSA have been shifted from singles and semis to rows. The total number of ground-related² units has been provided, but with a shift towards the

¹This is a minor simplifying assumption for the Regional-level analysis. In Burlington, south Oakville and Halton Hills there will probably be a small number of units on remaining greenfield parcels that did not develop before 2016 as well as a small number of rural units. For the purposes of this calculation, these are not considered significant.

²Ground-related units refer collectively to single detached, semi-detached and rowhouse units, which are primarily family-oriented housing, and represent, from market perspective, a continuum between the types. These are distinguished from apartment units which most typically accommodate non-family

medium-density types to meet density requirements. Table 9 shows the forecast greenfield development, but with the adjusted housing mix in the PSA.

Table 9					
Location of Greenfield Housing Growth 2016–2031 Restated Planned Unit Type in the Primary Study Area (Group B in Figure 1)					
		Single/Semi	Row	Apt	Total
Burlington		0	0	0	0
Oakville	North Oakville	5,000	3,200	500	8,700
Milton	Outside Built Boundary	10,200	3,400	500	14,100
Halton Hills		0	0	0	0
Primary Study Area		11,200	14,300	0	25,500
Halton Region		26,400	20,900	1,000	48,300

Source: Hemson Consulting Ltd., 2009, based on the Census and available Regional and local information.

Note: Totals may not add due to rounding.

The reader is reminded that these tables represent forecast units to be built by 2031. The development in the PSA is being planned as a complete community and includes approximately 20% planned apartment units. Like nearly all new areas, it is expected that the apartments would not be built during the initial phase of development but after 2031.

5. Significant Shift in Demand by Unit Type Is Required to Meet *Growth Plan* Requirements of 40% of Units within the Built Boundary

The more significant shift in unit demand, however, is the one that has to meet the *Growth Plan* intensification requirements, which is for 40% of all new residential units to be accommodated within the built boundary after 2015.

The demand by unit type required to be accommodated within the built boundary by the *Growth Plan* is shown in Table 10. The table indicates that there are nearly 15,000

households and, from a market perspective, are a distinctly different product from ground-related housing.

units in ground-related forms that cannot be accommodated within the supply inventory within the built boundary.

Table 10					
Location of Housing Growth Inside the Built Boundary, 2016–2031 Based on Housing Unit <i>Demand</i> by Type (Group C in Figure 1)					
		Single/Semi	Row	Apt	Total
Burlington		700	1,300	3,100	5,000
Oakville	South Oakville	1,400	400	4,000	5,800
Milton	Inside Built Boundary	400	1,100	1,600	3,100
Halton Hills		1,600	1,200	1,000	3,800
Primary Study Area		0	0	0	0
Ground-related units needing to be accommodated within the Built Boundary, but for which there is no Identified supply potential of the correct unit type		8,600	6,000	0	14,600
Halton Region		12,700	9,900	9,600	32,200

Source: Hemson Consulting Ltd., 2009, based on the Census and available Regional and local information.

Note: Totals may not add due to rounding.

Within the built boundary, there are few available options to provide for the 14,600 ground-related units that would be needed to meet anticipated demand by type. In order to meet the *Growth Plan's* 40% intensification objective, the future housing mix will need to shift substantially towards higher-density units, in particular apartments.

As a result, the assumption required for the land need analysis is that all of these ground-related units will be provided in an apartment form. This in turn will require a major cultural shift in housing preference and a major change in building economics to provide for significant numbers of larger family-oriented units in an apartment form. The restated housing unit forecast by type required to meet the *Growth Plan* density targets is shown in Table 11.

The unit type shifts required to meet the *Growth Plan* targets have been shown this way to assure that it is well understood what the scale and nature of the shifts in housing patterns are. It is also important to note that when the population is modelled from the housing units, the persons per unit in the apartment areas are based on the family households that would otherwise have been in ground-related units that would now be

in the apartment category. There is a range of implications, including for municipal services, if there is a shift in apartment occupancy from today's singles, young couples and the elderly to family households. These and other matters will need to be addressed as the *Growth Plan* is implemented locally.

Table 11					
Location of Housing Growth Inside the Built Boundary, 2016–2031					
Ground-Related Demand Reallocated to Apartments to Meet <i>Growth Plan's</i> 40% Rule					
(Group C in Figure 1)					
		Single/Semi	Row	Apt	Total
Burlington		700	1,300	6,300	8,300
Oakville	South Oakville	1,400	400	11,700	13,500
Milton	Inside Built Boundary	400	1,100	3,800	5,300
Halton Hills		1,600	1,200	2,300	5,100
Primary Study Area		0	0	0	0
Halton Region		4,100	4,000	24,100	32,200

Source: Hemson Consulting Ltd., 2009, based on the Census and available Regional and local information.

Note: Totals may not add due to rounding.

The *Growth Plan* uses the expression intensification to refer to all development that occurs within the built boundary whether in remaining vacant sites or “true” intensification arising from infill and redevelopment. The municipal planning work is based on intensification as infill and redevelopment. Table 12 shows the 32,200 units within the built boundary, allocated to the municipal planning categories. There is a small number of units that will be built on remaining vacant sites as well as in hamlets and other areas within the built boundary. Most of the units within the built boundary will be the identified for intensification from the local municipal work.

Finally, in the third column there are additional units that will need to be provided through intensification beyond what has already been inventoried. Halton Hills is currently studying intensification in the vicinity of the Georgetown GO station, which has not been otherwise included in intensification. For the purpose of this analysis, the GO Station area is assigned the 700 units shown in Halton Hills. The remaining 800 units is split between Burlington and Oakville, as the two largest communities in the Region. Milton has not been assigned any “extra” units since the units within the UGC

(described in Table 4) already exceed the Town's previous expectations of about 2,000 units being provided within the UGC by 2031.

Table 12				
Location of Housing Growth Inside the Built Boundary, 2016–2031 Units Restated into Municipal Supply Categories (Group C in Figure 1)				
	Remaining Vacant Lands	Identified Intensification	Additional Intensification Assigned	Total
Burlington	400	7,500	400	8,300
Oakville	1,400	11,700	400	13,500
Milton	400	4,900	0	5,300
Halton Hills	300	4,100	700	5,100
Primary Study Area	0	0	0	0
Halton Region	2,500	28,200	1,500	32,200

Source: Hemson Consulting Ltd., 2009, based on the Census and available Regional and local information.

Note: Totals may not add due to rounding.

C. MAJOR SHIFT IN HOUSING PATTERNS REQUIRED IN HALTON TO MEET THE *GROWTH PLAN* RULES

Combining the restated greenfield unit forecast with the intensification forecast shows that a significant shift in housing preferences over the forecast period will be required for Halton Region to meet the *Growth Plan* targets. As shown in Tables 13 and 14 below, the existing urban areas in all parts of the Region are forecast to accommodate significant amounts of apartment unit development through intensification, resulting in a very dense housing mix.

Location of All Housing Growth, 2016–2031				Table 13
	Single/Semi	Row	Apt	Total
Burlington	700	1,300	6,300	8,300
Oakville	6,400	3,500	12,300	22,200
Milton	10,600	4,400	4,400	19,400
Halton Hills	1,600	1,200	2,300	5,100
Primary Study Area	11,200	14,300	0	25,500
Halton Region	30,500	24,700	25,300	80,500

Source: Hemson Consulting Ltd., 2009, based on the Census and available Regional and local information.

Note: Totals may not add due to rounding.

Housing Mix, 2016–2031				Table 14
	Single/Semi	Row	Apt	Total
Burlington	8.4%	15.5%	76.2%	100%
Oakville	29.0%	15.8%	55.2%	100%
Milton	54.5%	23.0%	22.5%	100%
Halton Hills	31.5%	23.0%	45.4%	100%
Primary Study Area	43.9%	56.1%	0.0%	100%
Halton Region	37.9%	30.7%	31.4%	100%

Source: Hemson Consulting Ltd., 2009, based on the Census and available Regional and local information.

Note: Totals may not add due to rounding.

In comparing to past patterns, the degree of change in housing preferences in Halton required to meet the *Growth Plan* targets is shown in Table 15. This indicates a very significant change away from singles and semis and a significant change in favour of apartment units, both occurring in the not very distant future.

As noted above, this major change in housing preferences represents a significant shift in social and cultural values related to housing. It is unclear how or why this shift would occur in the Halton housing market given that most of the growth in the Region currently is based on family households moving into Halton from Toronto and Peel to occupy ground-related housing. Beyond specifying the outcomes in the *Growth Plan*, the Province has not yet used any of its policy tools to encourage this major shift in housing preferences. The Region and the local municipalities, while required to plan for this change, are extremely limited in their ability to affect such a change through policy.

Table 15				
Historic and Forecast Housing Mix Region of Halton				
	Single/Semi	Row	Apt	Total
1976–1986	62.3%	16.8%	20.9%	100%
1986–1996	52.7%	26.0%	21.3%	100%
1996–2006	66.5%	24.7%	8.7%	100%
2006–2016	58.5%	28.9%	12.7%	100%
2016–2031	37.9%	30.7%	31.4%	100%

Source: Hemson Consulting Ltd., 2009, based on the Census and available Regional and local information.

Note: Totals may not add due to rounding.

D. AS THE *GROWTH PLAN* IS IMPLEMENTED IN HALTON, SOME VARIATIONS IN THE LOCATION OF GROWTH MAY BE ADVISABLE

The general purpose of the 40% intensification rule in the *Growth Plan* is to encourage intensification as a way to accommodate growth, thus reducing the amount of new greenfield land designated for urban uses. One of the unintended consequences of the *Growth Plan* intensification rule, however, is that it provides a disincentive to accommodate any higher-density development in the existing greenfield areas because only the units inside the built boundary are given “credit” towards achieving the 40% rule.

As an example, the Trafalgar Core in the new North Oakville plan is intended to be a mixed-use transit-oriented community containing both residential and employment

uses. While a range of unit types are envisioned, a significant number of apartments are needed to achieve the planned structure and built form of the corridor. This is precisely the type of development the *Growth Plan* had hoped to encourage.

The *Growth Plan* rule, as stated, however, encourages all apartment development in Oakville to be directed south of Dundas Street to identified intensification areas, while leaving much of the Trafalgar Corridor of North Oakville undeveloped.

A similar situation of the *Growth Plan* rule discouraging development that would be considered desirable under the *Growth Plan* could be argued with respect to the area in the PSA in the vicinity of the proposed GO Station in Milton. Again, this type of development is encouraged by the *Growth Plan* generally, but discouraged by the specifics of the 40% rule.

The work in this report does follow the rule as stated; however, as Sustainable Halton moves to implementation stage, the Region and the Province should explore means to encourage the kind of development desired by both the *Growth Plan* and municipal plans to occur where it is planned and avoid the unintended consequences of the *Growth Plan* rules.

E. RESIDENTIAL LAND NEED WAS REDUCED BETWEEN THE PHASE I AND PHASE III IN ORDER TO CONFORM TO THE *GROWTH PLAN*

Hemson Consulting Ltd., in conjunction with Urban Strategies Inc., has undertaken the residential analysis from a perspective combining both statistical forecasts and community design. The overall residential land need has been reduced somewhat between the preliminary Phase I work and the current analysis. For the residential mixed-use land need, the following provides a brief rationale as to why the land area has changed from 2,400 to 1,680 gross hectares between Phase I and Phase III:

- The Phase I work was based on the new urban areas accommodating 37,000 units compared to a revised total of 32,700 units¹. All other things being equal, this would

¹ The unit total is based on the 25,500 ground-related units shown for the new greenfield area in Table 8 plus about 20% apartment units to ensure a range of housing types and a complete community. Consistent with typical urban development patterns, most of these apartment units are likely to be built in a later stage of development after 2031.

reduce the land need by 400 hectares, over half of the total reduction of 700 hectares.

- For the units provided in the new area, the Phase I work was based on a greater proportion of lower-density housing: in the range of 55% singles and semis, 25% rows and 20% apartments. The shift from this to 35% singles and semis, 45% rows and 20% apartments now being applied reduces land need by about another 100 hectares (based on the Urban Strategies report)¹.
- The remaining change of 200 hectares is the cumulative result of many factors including additional very detailed work on land needs for community uses.
- The latter two adjustments were largely undertaken to assure the greenfield areas in the Region remained in conformity with the *Growth Plan's* 50 persons plus jobs per hectare greenfield density rule.

The reason for the downward shift in housing unit demand in the new urban area is a reduced unit demand in the entire Region between 2006 and 2031. Regional demand is now estimated at 127,600 units for the 2006–2031 period, almost 8,000 units less than the 135,600 planned in Phase I. Both Phase I and Phase III accommodate a population of 780,000 in 2031 in accordance with the *Growth Plan*. The 2006 Census data was reflected in a full update of the GTA-wide forecasting models (released after the Phase I reports were completed) and resulted in the shift in planned housing units. The updated data included age structure, household formation rates by age and housing type occupancy patterns by age.

The effect of the update at the GTA and Halton levels resulted in a forecast average household size in 2031 of about 3% higher than had been forecast in the Phase I work. Across the entire Region this is really a very small change in patterns. However, because the new land areas are planned at the margin, it does have a larger impact on Sustainable Halton land planning:

- Total units to accommodate 2031 population used in Phase I: 293,000;

¹Including the planned apartment units, the housing units planned for the new greenfield areas total 32,700 made up of the 11,200 singles and semis and the 14,300 row units shown in Table 9 plus 7,200 apartment units. This yields a housing mix in the new urban area of approximately 35% singles and semis, 45% rows and 20% apartments.

- Total units to accommodate 2031 population using updated data: 285,000;
- Difference: 8,000 units, or 2.7%;
- Total units required in new urban area in Phase I: 37,000;
- Total units required in new urban areas using updated data: 32,700;
- Difference: 4,300 units.

The rest of the change (the difference between 4,300 and 8,000 units) would be the result of numerous small updates to the analysis including updated land supply data for the existing designated urban areas in the Region.

IV OUTLOOK FOR EMPLOYMENT LAND RECOGNIZES THE NATURE OF FUTURE INDUSTRY

Like residential development, the employment land outlook for Sustainable Halton is also prepared within the context of the *Growth Plan*. Unlike residential development, however, it needs to be recognized that the ability to shift employment patterns and densities through policy is very limited. The definition of employment land used in the Sustainable Halton work and consistent with the *Growth Plan* is the industrial-type and business park areas that are used exclusively for employment. Major retail and institutional uses are not included as part of the employment lands for planning purposes. Clearly these other lands do accommodate employment, but, appropriately, they are planned as part of residential communities.

Because the results of the employment land need analysis are significantly different from the results of the Phase I work, this chapter follows through the various changes both in data and in the approach taken to reach the new conclusions. Firstly, the analysis from Phase I is briefly reviewed; this is followed by an update based on current information but taking the same approaches to industrial structure as had been done in Phase I. The chapter concludes with the recommended employment land need, based on a recognition that there is and will continue to be a concentration of logistics and distribution functions in the Highway 401 corridor that typically develops at a much lower employment density than other business park uses.

A. SUSTAINABLE HALTON PHASE I WORK ESTIMATED A NEED FOR 600 GROSS HECTARES OF NEW EMPLOYMENT LAND

The estimate of employment land required to achieve the Provincial vision was originally provided in the Phase I land supply analysis. An estimated 64% of total Regional employment growth was forecast to be accommodated on employment land. Using standard densities of development by employment type, this yielded a land need of 2,270 net hectares. The majority — 95% of the land area — will be in industrial-type buildings, which accommodate employment land employment.

Future employment land requirements in the Region of Halton were estimated by applying a density factor to an estimate of future job growth. Based on the employment land need above, and the employment land supply provided by the Region's economic development strategy and ROPA 25 Ontario Municipal Board evidence, it was estimated in the 2007 work that this future demand exceeds the current designated employment land supply by approximately 250 net hectares. This ultimately resulted in an additional land need of 600 gross hectares. The three tables below summarize the key calculations of the employment land need in the 2007 work.

Table 16				
Halton Employment by Type, 2005–2031, as Forecast in the November 2007 Sustainable Halton Phase I Work				
	Employment Land Employment	Major Office Employment	Population- Related Employment	Total
2005	137,000	22,000	67,000	226,000
2031	218,000	51,000	116,000	386,000
Growth 2006–31	81,000	29,000	49,000	159,000

Source: Hemson Consulting Ltd, *Growth Outlook for the Greater Golden Horseshoe*.

Notes: Totals may not add due to rounding.

2005 employment estimate is used as the most recent employment land supply estimates are year-end 2005. Estimate is based on the 2001 base data and 2006 forecast.

Table 17				
Halton Employment Land Need to 2031 as Forecast in the November 2007 Sustainable Halton Phase I Work				
	Employment Land Employment	Major Office Employment	Population- Related Employment	Total
Growth 2005-2031	81,000	29,000	49,000	159,000
% on Employment Land	100%	65%	5%	64%
Growth on Employment Land	81,000	18,900	2,500	102,400
Employees per net ha	37.5	250	75	45
Land Demand (ha)	2,160	77	33	2,270
Share of Total Land Demand	95%	3%	2%	100%

Notes: Totals may not add due to rounding.

Employment density of 37.5 per ha for employment land employment is a reasonable estimate of employment density and was used in work on both the Oakville OPA 198 and North Oakville Secondary Plan. Employment density of 250 per ha for major office employment is based on 0.7 coverage and 28 m² per employee. Employment density of 75 per ha for population-related employment is based on 0.3 coverage and 40 m² per employee; both are typical ratios for this type of development in the GTA.

Table 18	
Comparison of Halton Land Supply and Demand to 2031 as Forecast in the November 2007 Sustainable Halton Phase I Work (in net ha)	
Occupied Employment Land	2,580
Vacant Employment Land	<u>2,530</u>
Total Employment Land	5,110
Full Employment Capacity of Land Is at 90% Development (see note 1)	<u>(510)</u> 4,600
Occupied Employment Land, 2005	2,580
Land Demand 2005–2031	<u>2,270</u>
Total Employment Land Need in 2031	4,850
Land Shortfall (in net ha)	(250)
Net Employment Land Need to 2031	250 net ha
Factor for Flexibility, Timing and Choice (see note 2)	<u>230 net ha</u> 480 net ha
Total Land Need (@ 80% net to gross)	600 gross ha

Note: 1. Development capacity is based on 90% occupancy of the total occupied and vacant lands in Halton. This is a standard factor based on: 5% of the total land area in long-term vacancy (never developed); and another 5% of the land base, at the end of the development period, as having been developed but would be under-utilised or have changed use from a standard employment land activity to another use, such as retail or institutional.

2. An additional 230 net hectares of employment land was included under the assumption that 10% of future land demand between 2005 and 2031 would be required for flexibility, timing, long-term vacancy, and choice and competition in the market.

The purpose of the Phase I work, it should be noted, was to set the stage for doing a much more complete analysis through Phase III. In particular, it was quite clear in 2007 that results could well change significantly once the new 2006 Census data was available. Also, it was clear that a more detailed analysis of the employment land supply needed to be undertaken; the Phase I analyses were based on local municipal data that was not always compiled using the same base years, the same definitions or the same measurement techniques.

B. UPDATED ANALYSIS INDICATES A SOMEWHAT GREATER NEED FOR EMPLOYMENT LAND TO MEET THE REGION'S LONG-TERM NEEDS

Since the Phase I work was completed in 2007, additional detailed analysis has been undertaken as planned. This analysis included the work of Regional and local municipal staff as well as the Sustainable Halton consulting team. Numerous elements of the base data and associated assumptions have been affected and adjusted as a result. However, a small number of factors explain most of the change.

The following three tables have been prepared in the same format as the three tables in the previous section allowing for comparison of the analysis.

1. Employment Forecast and Land Demand

With the updated information, the major revisions to the employment outlook for the Region are based on the following and shown in Table 19:

- The Phase I work was based on the Region accommodating 386,000 jobs in 2031, based on a 2006 estimated base of 233,000, an incremental growth of 153,000 jobs.
- With the benefit of the 2006 Census data which showed actual employment at 218,000 and using the precise employment target from Schedule 3 of the *Growth Plan* of 390,000, the growth increment to be accommodated has been revised to 172,000 jobs between 2006 and 2031.

Table 19				
Halton Employment Forecast by Type to 2006–2031				
	Employment Land Employment	Major Office Employment	Population Related Employment	Total
2006	127,000	21,000	69,000	218,000
2031	219,000	49,000	122,000	390,000
Growth 2006–31	92,000	28,000	53,000	172,000

Source: Hemson Consulting Ltd. based on Statistics Canada, Census of Canada and the *Growth Outlook for the Greater Golden Horseshoe*.

Notes: Totals may not add due to rounding.

The larger growth increment in employment growth overall means a larger increment in job growth on employment land than used in Phase I. Moving from a 2005 base in Phase I to a 2008 base now, Table 20 provides the forecast land demand for the Region to 2031. Land need analysis must begin from 2008 to be comparable to the date of the employment land supply information.

Table 20				
Halton Employment Land Need to 2031				
	Employment Land Employment	Major Office Employment	Population- Related Employment	Total
Growth 2008-2031	80,000	25,000	48,000	153,000
% on Employment Land	100%	65%	5%	64%
Growth on Employment Land	80,000	16,000	2,400	98,400
Employees per net ha	37.5	250	75	44
Land Demand (ha)	2,130	70	30	2,230
Share of Total Land Demand	95%	3%	2%	100%

Source: Hemson Consulting Ltd.

Notes: Totals may not add due to rounding.

Employment density of 37.5 per ha for employment land employment is a reasonable estimate of employment density and was used in work on both the Oakville OPA 198 and North Oakville Secondary Plan. Employment density of 250 per ha for major office employment is based on 0.7 coverage and 28m² per employee. Employment density of 75 per ha for population-related employment is based on 0.3 coverage and 40 m² per employee; both are typical ratios for this type of development in the GTA.

2. Employment Density Is a Key Assumption Reducing an Enormous Number of Economic Attributes to a Single Statistic

The employment densities, existing and future, and for different types of uses, are based on experience in Halton, the GTA, and elsewhere. A summary of recent estimates in various jurisdictions prepared by Hemson (to assure constancy in measurement and definition) is shown in Table 21. They are shown in both net hectares, which is the standard measure for analytical purposes and the basis of planning, and in gross hectares, which allows for comparison to the *Growth Plan's* mandated 50 persons plus jobs per hectare in standard greenfield development.

Table 21		
Employment Land Employment Density Estimates in Halton and Nearby Jurisdictions		
	Employees per net ha	Employees per gross ha
Burlington	50	40
Oakville	40	32
Milton	33	26
Halton Hills	38	30
Halton Region	42	33
Richmond Hill	65	52
Vaughan	47	38
Toronto	45	36
Mississauga	39	31
Brampton	38	30

Source: Hemson Consulting Ltd.

Note: Only land and employment related to industrial-type buildings is included; major freestanding office buildings and major retail uses are not included in this calculation.

In Halton Hills, a significant proportion of the activities associated with employment land employment occurs in the rural areas and other scattered locations. The employment density calculation only relates to the employment land employment occurring on planned employment lands (including Mansewood).

All of the jurisdictions outside of Halton in Table 21 have had the benefit of municipal employment surveys to guide the density results. In Halton, where such a survey has not been undertaken, the estimates are based on Census Place of Work data by industry type to estimate total employment land employment. Land areas are derived from GIS.

Employment density is a key assumption in this work, so there is a number of critical matters to understand about employment land density:

- Employment density is cyclical in response to business cycles and associated changes in employment. All figures in Table 21 are based on information collected between 2006 and 2008, at the very peak of the most recent business cycle. At the other end of the business cycle, the densities will be much lower. In *Halton Urban Structure Plan* work prepared during the early 1990s recession, the best estimates of employment land density in Halton at that time were between 30 and 35 employees per net hectare, much lower than the 42 estimated now.
- After accounting for cyclical variations in employment density, there actually appears to be relative stability over time. There are three balancing trends in employment density:
 - i. In manufacturing and distribution business activities, there is a long-term trend in declining employment density, as increased productivity through automation and capital investment increases economic output but reduces the number of employees in a given building. Recent trends are indicating sharp further declines in employment density as supply chain management and logistics become a larger part of the market for new development.
 - ii. The countering trend is one of increased employment densities as denser office uses are more commonly integrated into more industrial functions, that is, the era of an “office downtown” and a “plant in the suburbs” is virtually gone with the trend to integrate many business functions into a single facility.
 - iii. There is an increased amount of “flex” space, which can be used either as office, light industrial or storage space, as necessary, for the operation of a firm. This has allowed many uses that in other times might have occupied a different type of space to occur in industrial-type buildings. The Region of Halton’s planning offices on North Service Road are a perfect example of a building currently being used for office space, but, given the site and ceiling height, may well be adapted for a range of other business purposes over the life of the building.
- The geographic concentration of these trends does much to explain the variations in employment density in different jurisdictions. Richmond Hill (and neighbouring Markham) have the highest employment densities in the GTA, where there is virtually no distribution and warehousing and very little large-scale manufacturing. At the other end of the range are Brampton and Mississauga, and even more so Milton, where the development has a significant amount of logistics facilities and where new businesses are typically low-density warehousing and distribution.

- Job density is a critical assumption in long-term employment land planning. It connects employment growth and land need, and provides a method of distributing employment by activity throughout the planning area. It embodies a wide range of economic characteristics in a single summary statistic.

While a valuable and practical tool for forecasting land need, there is very limited ability for a planning authority to control or direct employment density. Through land use planning, a municipality can direct use to certain areas, participate in site planning, and regulate built form. In residential land planning, built form is assumed to be closely related to the type of household that will occupy it, but in employment land planning, similar assumptions are not made because many different activities will take place in similar building typologies and job density is just a fact of how any particular economic activity is undertaken.

Taking account of the business cycles, the observed trends in employment density, and the ability of planning to direct employment density, the 37.5 employees per net hectare for employment land planning purposes is seen as a reasonable basis for long-term growth in the Region and has been reflected in work conducted over the past 10 or so years, including the land planning for North Oakville.

3. 960 Gross Hectares of Land Required Before the Effect of the Logistics–Distribution Concentration in the Highway 401 Corridor Is Considered

The other major update from Phase I to Phase III has been in the analysis of the employment land supply within the Region. This has now been revised on a site-by-site basis using the Region's GIS data¹. This full review has allowed a complete Region-wide inventory of about 3,500 land parcels to be prepared based on a consistent approach to the types of lands included and how net and gross measurements are taken. This is shown in Table 22.

¹*Hemson Consulting is concurrently preparing an employment land study for the Town of Oakville. To avoid duplication of analysis, the Town's GIS data for employment land was used in this Regional work. Variations between the Regional GIS data and the local data are nominal.*

		Table 22		
Halton Employment Land Supply, 2008 (in net ha)				
		Occupied	Vacant	Total
Burlington	Existing Designations	1,020	340	1,360
	Tremaine	<u>0</u>	<u>50</u>	<u>50</u>
	Total	1,020	390	1,410
Oakville	South	1,170	260	1,430
	North	<u>20</u>	<u>450</u>	<u>470</u>
	Total	1,190	710	1,900
Milton	401 Business Park	600	230	830
	Central Area	40	<10	40
	Other	30	10	40
	Derry Green	<u>0</u>	<u>420</u>	<u>420</u>
	Total	670	660	1,330
Halton Hills	Acton	40	40	80
	Mansewood	20	10	30
	Georgetown	110	<10	110
	Gateway 401	<u>110</u>	<u>210</u>	<u>320</u>
	Total	280	260	540
Halton Region		3,160	2,020	5,180

Source: Hemson Consulting Based on Municipal GIS Data.

Note: Totals may not add due to rounding.

Applying the updated employment and land supply information, Table 23 provides the updated calculation of employment land need, indicating a need for 960 gross hectares of additional employment land by 2031.

In comparison to the Phase I work, the “factor for flexibility, timing and choice” has been removed. The Province and others have argued that this factor should not be included, since flexibility is provided by having a 20+ year planning time frame, subject to quinquennial statutory reviews. This is a reasonable position in the context of the *Growth Plan* which seeks, among other things, to assure urban lands are only designated as absolutely necessary to accommodate planned growth.

The planning for new employment, however, still includes 5% long-term vacancy. This vacancy factor is based on the observed phenomenon in Halton and elsewhere that about 5% of employment land is not brought to market or developed over the long

term. This vacancy can be due to a number of factors including: lands held for future expansion, but not used; lands whose configuration or access make it unattractive to new development; or lands simply not brought to market by the owner for their own personal or corporate reasons.

Table 23	
Comparison of Halton Land Supply and Demand to 2031 (in net ha)	
Occupied Employment Land	3,160
Vacant Employment Land	<u>2,020</u>
Total Employment Land, 2008	5,180
Full Employment Capacity of Land Is at 90% Development (see note)	<u>(520)</u> 4,660
Occupied Employment Land, 2008	3,160
Land Demand 2008–2031	<u>2,230</u>
Total Occupied Employment Land, 2031	5,390
Land Shortfall (in net ha)	(730)
Add 5% Long-term Land Vacancy	(770)
Total Land Need (in gross ha at 80% net to gross)	(960)

Source: Hemson Consulting Ltd.

Notes: Totals may not add due to rounding.

Development capacity is based on 90% occupancy of the total occupied and vacant lands in Halton. This is a standard factor based on: 5% of the total land area in long-term vacancy (never developed); and another 5% of the land base, at the end of the development period, as having been developed but would be under-utilised or have changed use from a standard employment land activity to another use, such as retail or institutional.

This latter factor applies only to the existing areas, much of which are already developed; new lands are assumed to be newly developed within the planning period and would not be subject to either the underutilisation or change in use that, in part, comes with the age of the development.

The total requirement indicated is based on the employment land employment all occurring at similar densities to existing development in Halton today. It does not take account of the increasing proportion of newer development, particularly in the Highway 401 corridor occurring in the logistics and distribution sectors, which typically has a very low employment density.

4. 1,100 Gross Hectares of Employment Land Now Recommended to Accommodate Demands of the Logistics–Distribution Concentration in the Highway 401 Corridor

It was noted in the Phase I work and throughout the subsequent process to date that much of the new employment land development, particularly in Milton and Halton Hills along Highway 401 corridor, has a much lower employment density than elsewhere in the Region because of the preponderance of highly automated distribution and warehousing facilities. As discussed above, these have a very low on-site employment density:

- For these types of facilities, the density is often in the 12 to 15 employees per net ha range, compared to Halton’s work, based on an average of 37.5 employees per net ha for employment land uses.
- The employment densities for recent development of distribution centres are based on reviews of small areas and some individual building records from various sources in Milton, Mississauga and Brampton. A complete study of these uses, from a land use planning perspective, has not, to our knowledge, been undertaken. As well, this issue is widely discussed in the industry and there is much anecdotal evidence around these low employment densities in distribution centres.
- Some facilities can have on-site permanent employment as low as one or two employees per net hectare. However, on any given day, there may well be dozens of others in the building including truckers and the employees of the firms whose goods are being managed by the logistics facilities.
- A related matter of some interest may be that the building density, measured by site coverage or Floor Space Index (FSI), is often higher than other types, because so little employee parking is required. Consequently, the low job density may actually result in more building space in proportion to the site and therefore higher property assessment than might be yielded by some uses with a higher employment density.

The planning challenges associated with logistics facilities are not unique to Halton, but rather are figuring prominently in neighbouring Brampton and, to some degree, Mississauga, both also in the 401 Corridor where these uses have concentrated in recent years. While noting the challenge of accommodating these uses in the Phase I and subsequent work, we did not alter the overall employment density assumption.

An additional attribute of this area is the concentration of energy-related uses which have an exceedingly low employment density. For the purpose of the employment land analysis, we have excluded hydro corridors, the Trafalgar Sub-Station and the new power plant being built on the north side of Highway 401 in Halton Hills. All of these energy-related uses are very low-density from an employment perspective. Given that

the Trafalgar Sub-Station in Milton is a critical junction in southern Ontario's power distribution grid, the vicinity may well need to accommodate other low-density energy-related uses, beyond the current power plant under construction.

Through further collaboration between the study team and Regional and local municipal staff, including much discussion with the Towns of Milton and Halton Hills, it was determined that the plan should try to recognise actual rather than hoped-for densities of development.

Given the existing types of development in established employment areas in Burlington and Oakville, and given the large amount of new land supply on Highway 407 (a toll road with high truck tolls), we would not expect a greater concentration of these lower-employment-density, truck-orientated facilities in southern Halton. This discussion is strictly limited to expectations for development in Milton and Halton Hills.

In order to appropriately recognise the type of development expected to continue in the Highway 401 corridor, the employment land need analysis has been revised to take account of these uses. This alternative is best demonstrated by thinking of the areas where distribution, logistics and energy predominate as a distinct sub-category of employment. This approach is the basis for the 1,100 gross hectare employment land need shown in Table 24.

It is notable that even at the higher land area shown in Table 24, the lower density of 17.5 jobs per gross hectare, or 23 per net occupied hectare, still remains an assumption of employment density far higher than being observed for the major warehouse and distribution facilities currently locating in Halton. There is still a measure of assumed change in employment land density achieved through Provincial policy changes underpinning this analysis.

Table 24		
Employment Land Incorporating the Distribution–Logistics Cluster along Highway 401		
Base Scenario	33,600	jobs
	35	employees per gross ha (approximately 45 employees per net ha at post-2031 capacity development and accounting for long-term vacancy)
	960	gross hectares of new urban land
Recommended Scenario	28,700	jobs at standard employment density
	35	employees per gross ha (approximately 45 employees per net ha at post-2031 capacity development and accounting for long-term vacancy)
	820	gross ha of new urban land
	4,900	jobs at Distribution–Logistics–Energy Cluster employment density
	17.5	employees per gross ha (23 per net ha)
	280	gross ha of new urban land
	1,100	Total land required (gross ha)
	30.5	employees per gross ha overall

Source: Hemson Consulting Ltd.

Based on this analysis, the Region of Halton should plan for the addition of 1,100 gross hectares of employment land within the PSA.

V PREFERRED GROWTH SCENARIO MEETS THE *GROWTH PLAN* TARGETS AND LOCAL POLICY OBJECTIVES

Bringing together the residential and the employment analyses from the previous chapters provides an overall preferred growth scenario¹ for the Region and the local municipalities within the Region. This growth scenario and the location concepts for the distribution of growth within the Region need to be evaluated against the policy directions of the *Growth Plan* from a Provincial perspective, but also need to be considered in the context of policy objectives of the Region and local municipalities. This chapter first discusses the issue of conformity with the *Growth Plan*. Some of the key implementation issues are then identified, followed by a discussion of the distribution of growth within the Region and how it relates to some key municipal objectives for Sustainable Halton.

A. PREFERRED GROWTH SCENARIO MEETS THE *GROWTH PLAN*'S QUANTITATIVE TARGETS

It is worth reviewing the four key quantitative requirements established in the *Growth Plan* to which the preferred growth scenario conforms. These are:

- Meeting the growth forecast in Schedule 3;
- Planning the UGCs to a minimum of 200 persons plus jobs per hectare;
- Providing for a minimum of 40% of new housing units after 2015 within the built boundary; and
- Planning the greenfield areas of the Region to meet a minimum of 50 persons plus jobs per hectare.

The first three of these have been met in work already described, as they are essentially inputs to the calculation of residential requirements both inside and outside the built

¹“Preferred growth scenario” refers to the results of the foregoing analysis of urban land need and is not to be confused with the expressions “preferred growth concept” or “preferred growth option” used in the *Urban Strategies* report dealing with amount and location of new urban areas within the local municipalities.

boundary. The remaining measure to test is whether the results of the preferred growth scenario meet the 50 persons plus jobs combined per hectare minimum for the greenfield areas.

1. Population Capacity Is Estimated by Applying a Person Per Unit (PPU) Factor to Housing Unit Potential Density

The *Growth Plan* establishes a high-level gross density measure and thus provides the Region with considerable direction as to how land within its jurisdictions is to be developed. A combined gross density measure of 50 people and jobs per hectare is to be achieved in the designated greenfield area of the upper-tier municipalities, including the Region of Halton.

The *Growth Plan* density target considers people and jobs per hectare together. Jobs include all employment, not just those in industrial-type businesses in employment lands. Employees from all sectors are counted, including business-serving and population-serving jobs in retail, food and service businesses, professionals in offices, and people working from home.

The density target for greenfields in the *Growth Plan* (measured over the entire designated greenfield area of each upper-tier municipality) is a gross measure as it employs the following definition: a combination of people and jobs over the entire land area *net* of natural heritage features. This form of measurement allows comparison of built form across jurisdictions at some level; however, it can also misrepresent the built forms between different areas where landscapes vary or where there happen to be many (or few) hydro corridors, highways, railways, cemeteries or golf courses, all of which can significantly influence the overall calculation. The method for calculating the *Growth Plan* density for Sustainable Halton is summarized below:

- The housing unit potential is based on the planned units and unit mix shown in residential supply. The planned population for the greenfield density calculation is a capacity measure of housing units, not all of which will be built out within the 2031 planning time frame.
- The number of persons per unit (PPUs) is based on the unit-specific PPUs used in the growth forecasts being prepared for the Region in conjunction with the *Growth Plan* conformity work. PPUs not only vary by location, but also over time. The capacity household population is based on forecast 2016 PPUs for each of the areas. Because PPUs change over time and the areas will be built at different times during the planning period, this “mid-point” measure of the *Growth Plan* planning period was determined as an appropriate common basis for measurement.

- This approach is also being used by a number of other municipalities in the GTA and has been discussed among the Regional Planning Commissioners of the GTA. The household population estimates are then factored up to include the non-household (institutional) population and the Census net undercoverage to provide the total population.

2. Employment Capacity Estimated as a Total of All Types of Employment

The estimated employment capacity of the greenfield areas is based on two components of employment: the employment in the planned industrial-type employment areas and the other population-related employment accommodated throughout the greenfield communities. In addition, there are major office uses much of which is accommodated within the employment areas. The land analysis takes account of the anticipated 5% long-term land vacancy in employment land, consistent with the land supply analysis.

The employment density within employment areas is a combined employment density of all uses at ultimate development in the employment areas at 44 employees per net hectare (Table 20). That is, the lands are primarily employment land employment (i.e. employment accommodated in industrial-type buildings) at 37.5 employees per net hectare (per the *Employment Land Strategy*) plus a portion of freestanding office development (at 250 employees per net hectare) and a small amount of population-related employment (75 employees per net hectare). The exceptions are North Oakville, where the specific employment calculations from the recent secondary plan work are used, including the proposed new hospital, and the primary study area where the employment densities take account of the logistics–distribution concentration.

The employment capacity of the entire greenfield area also includes work-at-home employment based on the current ratio of work-at-home employment to population in Halton. In addition, population-related employment accounts for retail, service, education, health care, recreation and other employment generally found at scattered locations throughout the community. To be conservative, the ratio used here is lower than the expected population-related employment generated from the population in this area, on the basis that a substantial number of these jobs will be located within existing concentrations, such as the UGC.

The total employment used in the calculation is the “jobs” in the persons plus jobs per hectare measure in the *Growth Plan*. Like the residential development calculations, this is a capacity measure of employment. The employment capacity includes the employment land employment as well as a portion of major office and population-related employment. Not all of the development in the latter two types will be built out within the 2031 since office development, in particular, often occurs later in the development cycle.

3. Land Area Based on Gross Area Less the Natural Heritage System

As already described, land areas used for the density calculation in the *Growth Plan* only exclude environmentally protected areas. While the *Growth Plan* provides some guidance as to exactly which environmental lands should be removed for the purposes of the calculation, in Halton we have used the natural heritage system, as defined by the Region.

4. Overall Density Exceeds the 50 Persons Plus Jobs per Hectare Required by the *Growth Plan*

The residential and employment land outlook combined for Sustainable Halton meets the *Growth Plan* target of 50 persons plus jobs per hectare, using the definition of the land area for measurement determined by the Region, and anticipating a significant level of intensification within the built-up area.

The greenfield density calculation is provided in Table 25 indicating a total greenfield density at capacity population and employment of just over 50 persons plus jobs per hectare. Therefore, on this final quantitative test of conformity to the *Growth Plan*, the recommended growth scenario is in conformity.

Greenfield Density Calculation for Growth Plan Conformity					
Location	Capacity Population	Capacity Employment	Total Persons + Jobs	Land Area (gross ha)	Density
Burlington	12,200	13,200	25,300	570	44.2
Oakville	63,500	39,200	102,700	2,240	45.8
Milton	102,500	36,900	139,400	2,300	60.6
Halton Hills	7,500	18,200	25,700	780	33.1
Existing Greenfield	185,700	107,400	293,200	5,890	49.7
PSA	97,600	46,900	144,500	2,780	52.0
Total	283,300	154,300	437,600	8,670	50.5

Source: Hemson Consulting Ltd. and Region of Halton GIS

Note: Totals may not add due to rounding.

B. ADOPTING HIGHER INTENSIFICATION AND DENSITY TARGETS THAN *GROWTH PLAN* LIKELY TOO GREAT A CHALLENGE TO ACHIEVE

One of the issues that arose through consultation with the public and local municipalities was the potential for the Region of Halton to exceed the *Growth Plan* target of 50 persons and jobs combined per ha and 40% intensification. Two key questions were posed:

- What would be the implications of moving from the *Growth Plan* minimum 40% intensification to a level of 45% of new housing being constructed within the built boundary from 2015 onward? and
- What would be the implication of moving from the *Growth Plan* minimum 50 persons plus jobs per hectare to a higher level on the new urban lands being planned in the Region?

The major effect of either of these tests is to change the housing mix so that more medium- and higher-density units are built in order to either accommodate more development through intensification or to reduce the residential land required. Almost all units provided through intensification are apartments, with little additional infilling with low- and medium-density units. Statistically, achieving a shift to a higher level of intensification is simply a matter of shifting more units into apartments from ground-related housing, as shown in Table 26.

- A market-based forecast for the Region, which would be expected under the current Regional policy framework, *and* without acknowledging the *Growth Plan*, would suggest about 59% single and semi-detached, 28% rows, and 13% apartments over the whole Region for the entire 2006–2031 period.
- To achieve the *Growth Plan* target for 40% intensification, the housing mix will need to shift to accommodate approximately 31% apartments in the 2016 to 2031 period; and
- To achieve a higher target of 45% of new housing units provided through intensification the housing mix would need to shift to 36% apartments for the 2016 to 2031 period.

	Current development pattern of about 20% of all new housing units accommodated through intensification	<i>Growth Plan</i> target of 40% of all new housing units accommodated through intensification beginning in 2016	Higher alternative target of 45% of all new housing units accommodated through intensification beginning in 2016
New Urban Land Required to 2031	1,100 ha employment <u>3,400</u> ha residential 4,500 ha total	1,100 ha employment <u>1,700</u> ha residential 2,800 ha total	1,100 ha employment <u>1,500</u> ha residential 2,600 ha total
Portion of total housing that must be provided in an apartment form to meet the target	1996-06 9% 2006-16 13% 2016-31 13%	1996-06 9% 2006-16 13% 2016-31 31%	1996-06 9% 2006-16 13% 2016-31 36%

Source: Hemson Consulting Ltd.

It is clear from this analysis that there would be some saving in the need to designate new urban land by shifting the pattern. However, planning for a greatly increased proportion of apartments remains a major challenge to achieve. In Halton, it is the desire for ground-related family-oriented housing that drives the need for additional urban lands for residential uses.

The shift in housing preferences required to achieve the *Growth Plan* targets is already very dramatic in a short period of time — from the current 13% of new units in apartments to 31% under the *Growth Plan* vision. This already means a significant number of family households would need to choose apartment living over ground-related, a significant cultural shift for Halton. Practically speaking, it is uncertain what the incentive would be for families, where space is at a premium, to pay the nearly double per square foot cost of construction for apartments over ground-related units.

It is, in our view, challenging enough to make the shifts required to meet the *Growth Plan* minimum target. Going beyond this level would likely be exceedingly difficult for the Region of Halton to achieve.

The second question is the consideration of alternative greenfield densities for the portion of the greenfield area that is new urban area; we are not testing the re-planning

of existing greenfield areas, such as North Oakville. In Table 27, the implications are shown of change in the density basis, recognising the employment density is kept fixed as there is little ability of the Region to change the economic base or the employment density of economic activity through planning policy.

The conclusion of the analysis in Table 27 is like those of the previous table. In making change to higher density of greenfield areas means more households in apartment units. Again, the shift already required to minimally meet the *Growth Plan* is quite significant. Making greater changes would be an even greater challenge in a relatively short period of time.

Table 27			
Comparison of New Urban Land Need and Housing Mix Within the New Urban Area Under the <i>Growth Plan</i> Greenfield Density Target and Under Two Higher Alternative Greenfield Density Targets			
	Preferred Growth Scenario at 52 persons plus jobs per ha	Higher Alternative Target at 60 persons plus jobs per ha	Second Higher Alternative Target at 65 persons plus jobs per ha
New Urban Land Required to 2031	1,100 ha employment <u>1,700</u> ha residential 2,800 ha total	1,100 ha employment <u>1,300</u> ha residential 2,400 ha total	1,100 ha employment <u>1,100</u> ha residential 2,200 ha total
Housing mix within the new urban residential area required to meet the target	Single/Semi 35% Row 45% Apartment 20% Total 100%	Single/Semi 10% Row 50% Apartment 40% Total 100%	Single/Semi 0% Row 50% Apartment 50% Total 100%

Source: Hemson Consulting Ltd.

C. DISTRIBUTION TO EXISTING DEVELOPMENT AREA PLUS THE GROWTH CONCEPTS PROVIDES A TOTAL LOCAL DISTRIBUTION OF GROWTH

Having completed the analysis and determined that the Regional growth scenario conforms to the *Growth Plan*, the results can be summarized for Regional and local municipal analysis and public review. Tables 28 and 29 below provide the population and employment outlook to 2031 for the Region by local municipality and for the proposed new urban area. Table 29 also provides the activity rates (the ratio of employment to population) for each area. The capacity population and employment will be higher than those shown for 2031, since higher density residential development and additional employment growth will occur after 2031 within the greenfield areas.

Both definitions of population — with and without the Census net undercoverage — are provided for the purpose of comparisons. The Census population is used to calculate activity rates (since there is no undercoverage factor for employment) and the current *Halton Region Official Plan* expresses the population as a Census population. The total population (including net undercoverage) is used in the *Growth Plan* and, as a result, is increasingly the measure being used for official plan purposes in the GTA/H.

Table 28				
Population Forecast to 2031				
Census Population and Total Population (including net undercoverage)				
	Census Population		Total Population (including net undercoverage)	
	2006	2031	2006	2031
Burlington	164,000	185,000	171,000	193,000
Oakville	166,000	246,000	172,000	255,000
Milton	54,000	169,000	56,000	175,000
Halton Hills	55,000	71,000	58,000	74,000
Primary Study Area	0	79,000	0	83,000
Halton Region	439,000	750,000	457,000	780,000

Source: Statistics Canada and Hemson Consulting Ltd.

Table 29				
Employment Forecast to 2031				
	Employment		Activity Rate	
	2006	2031	2006	2031
Burlington	88,000	106,000	53.8%	57.1%
Oakville	82,000	127,000	49.6%	51.8%
Milton	28,000	88,000	51.1%	52.4%
Halton Hills	20,000	32,000	35.5%	45.1%
Primary Study Area	0	37,000	n/a	46.0%
Halton Region	218,000	390,000	51.1%	52.0%

Source: Statistics Canada and Hemson Consulting Ltd.

Note: Population in the tables is total population including Census net undercoverage. Employment never includes a factor for net undercoverage. Activity rates are therefore properly calculated using the Census population, i.e. the activity rate is the employment divided by the Census population (excluding the approximately 4% undercoverage).

Using these distributions, the three land use concepts detailed in the Urban Strategies report can be reviewed from the perspective of the resulting municipal population and employment totals. Table 30 on the following page provides the 2031 population, employment and activity rate for Milton and Halton Hills under each of the three growth concepts. Burlington and Oakville are not shown in table as both communities have their planned growth “fixed” as shown in Tables 28 and 29.

Both Halton Hills and Milton have been seeking growth concepts which allow each of the communities to attract new employment as well as to accommodate new population. In Halton Hills, the key conclusions to be drawn from Table 30 are that the community can increase its activity rate from its current level under any growth concept and achieve a reasonable balance between population and employment under Concept 2. In Milton, a key objective of the community has been to accommodate growth within the Region, as long as it could plan to meet a balanced activity rate of 50% by 2031. Either Concepts 2 or 3 meet Milton’s policy interests.

Table 30			
Distribution of Population and Employment Between Milton and Halton Hills Under the Three Growth Concepts			
		Milton	Halton Hills
Base Before New Urban Area	2031 Population	175,000	74,000
	2031 Employment	88,000	32,000
	Activity Rate	52.4%	45.1%
Concept 1	Added Population	83,000	0
	Total Population	258,000	74,000
	Added Employment	29,000	8,000
	Total Employment	117,000	40,000
	2031 Activity Rate	47.2%	56.1%
Concept 2	Added Population	63,000	20,000
	Total Population	238,000	94,000
	Added Employment	26,000	11,000
	Total Employment	114,000	43,000
	2031 Activity Rate	50.0%	47.1%
Concept 3	Added Population	43,000	40,000
	Total Population	218,000	114,000
	Added Employment	24,000	13,000
	Total Employment	112,000	45,000
	2031 Activity Rate	53.3%	41.3%

Note: Population is total population including Census net undercoverage.

Employment never includes a factor for net undercoverage. Activity rates are therefore properly calculated using the Census population, i.e. the activity rate is the employment divided by the Census population (excluding the approximately 4% undercoverage).

Source: Statistics Canada and Hemson Consulting Ltd.

Although from an analytical perspective the growth scenario and concepts presented in this report meet the *Growth Plan* requirements, it will be an exceptionally difficult plan to implement. Land use planning can set the preconditions, but is otherwise very limited in its ability to affect such a change through policy. Other actions will need to be taken to improve the local municipalities' attractiveness for higher density development over the planning period, in particular investment in transportation infrastructure and other elements of the urban environment. To this end, the Province

will be able to play a key role in achieving a more intensive pattern of development in the Region, consistent with its broader objectives for transit-oriented development, more compact urban form and the development of complete communities.