

Final Report

Prepared by Hemson for The Corporation of the United Counties of Prescott and Russell

Growth Management Strategy Update

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Executive Summary

The United Counties of Prescott and Russell (UCPR) is undertaking a formal comprehensive review to update its Official Plan, a key component of which is the Growth Management Strategy (GMS). This report provides a long-range growth outlook for the UCPR and its lower-tier municipalities and assesses urban land requirements. It updates similar work undertaken by Hemson in 2012.

The GMS updates the Counties population, housing, and employment forecasts over a planning horizon to 2046. The forecasts find that:

- The UCPR, which is in the midst of a growth surge, is set to grow rapidly over the next decade. Although slowing between 2031 and 2046 as the population ages, growth will remain steady until it reaches a permanent resident population of 125,000 and nearly 36,000 jobs in 2046. The major driver of growth will be in-migration from the City of Ottawa and its environs by young families seeking affordable singled detached homes.
- The rate of housing growth in the UCPR will outpace the rate of population growth over the next 25 years. The current market preference for single detached homes will shift somewhat towards medium and higher density housing forms as the effect of market demand and PPS policies that encourage intensification, transit-supportive communities, and a more compact urban form take hold.
- The UCPR remains an attractive location for development in employment areas (including trade and industry designations), particularly those that are located within easy access of Highway 417, are fully serviced, are close of existing labour pools and existing business clusters, and allow for a range and mix of business activities (in particular, the assembly of large land parcels). The development of the 417 Industrial Park in the Township of Russell is critical in this respect.

- Employment growth in the UCPR will be steady over the period to 2046. Most employment growth will be associated with the development of employment areas. However, a significant portion of employment growth will occur in direct response to population growth and in rural settlements and rural areas.

An assessment of the land required to accommodate the growth forecasts was undertaken. The assessment concludes that:

- The overall community area (or residential) land supply of 1,285 developable hectares is sufficient to accommodate the projected growth at the County level. However, based on the housing growth allocations, Russell does not have enough designated growth area lands to accommodate its long-term growth. In Russell's case, an additional 163.8 hectares of designated community area has been identified. Two broad options for dealing with this include:
 - increasing the required density for development in designated growth areas in order to reduce or eliminate the land need. In this respect, it is noted that the densities assumed in the land needs assessment in this report are already higher than densities on recent developed lands; and/or
 - expanding settlement area boundaries in Russell. This process requires more detailed analysis of the feasibility and most appropriate location for expansion and must be undertaken in accordance with PPS policies 1.1.3.8 and/or 1.1.3.9.
- The employment area (trade and industry) land supply of 570.6 developable hectares is sufficient to accommodate the projected employment growth at the County level. However, as with the residential land needs assessment, Russell, and to a minor extent Casselman, currently do not have enough land to accommodate their allocation. In Russell's case, an additional 104.9 hectares of designated employment

area is required, almost certainly as an expansion to the 417 Industrial Park. In the case of Casselman, an additional 3.8 hectares is theoretically required.

1. Introduction

The United Counties of Prescott and Russell (UCPR) is undertaking a formal comprehensive review to update its Official Plan, a key component of which is the Growth Management Strategy (GMS). This report provides a long-range growth outlook for the UCPR and its lower-tier municipalities and assesses urban land requirements to 2046. It updates similar work undertaken by Hemson in 2012.

The GMS has been closely co-ordinated with the lower-tier municipalities. Background data and technical assumptions have been made available to lower-tier municipal planning staff for review and comment throughout the process.

A. Purpose and Context of Update

The GMS updates the Counties population, housing, and employment forecasts over a planning horizon to 2046. The analysis draws on a range of publicly available economic and demographic data, municipal planning data and documents, Provincial population projections undertaken by the Ontario Ministry of Finance, real estate market information, and discussions with local municipal planning staff.

A review of the long-term growth outlook is particularly important at this time in light of:

- the Provincial Policy Statement 2020 (PPS), which extends the planning horizon for municipal land needs analysis from 20 to 25 years and provides more detailed policy direction related to housing options, transit-supportive development, employment land protection, and planning for climate change;

- increased population growth that has occurred in the UCPR since the 2016 Census;
- the pattern of growth across the UCPR. Although growth is concentrated in Russell and Clarence-Rockland, growth pressures are increasingly apparent in other communities. This warrants a review of the residential and non-residential “trade and industry” land supply to ensure the Counties have sufficient land to accommodate growth;
- the effects of the changing nature of the regional economy, and in particular the increasingly close economic relationship between communities in the western part of UCPR and the City of Ottawa; and
- the short and long-term effects of the COVID-19 pandemic.

B. PPS Establishes Policy Framework

Under the *Planning Act*, the UCPR Official Plan is required to be consistent with the PPS. The analysis in this report is undertaken within the framework of PPS policies, particularly those in Section 1.0 Building Strong Communities. Among the many policies in this section are those that require that:

- a coordinated, integrated and comprehensive approach be used when dealing with planning matters within municipalities, across lower, single and/or upper-tier municipal boundaries, and with other orders of government, agencies and boards including population, housing and employment projections, based on regional market areas (1.2.1 g);
- sufficient land be made available to accommodate an appropriate range and mix of land uses to meet projected needs for a time horizon of up to 25 years, informed by provincial guidelines (1.1.2);

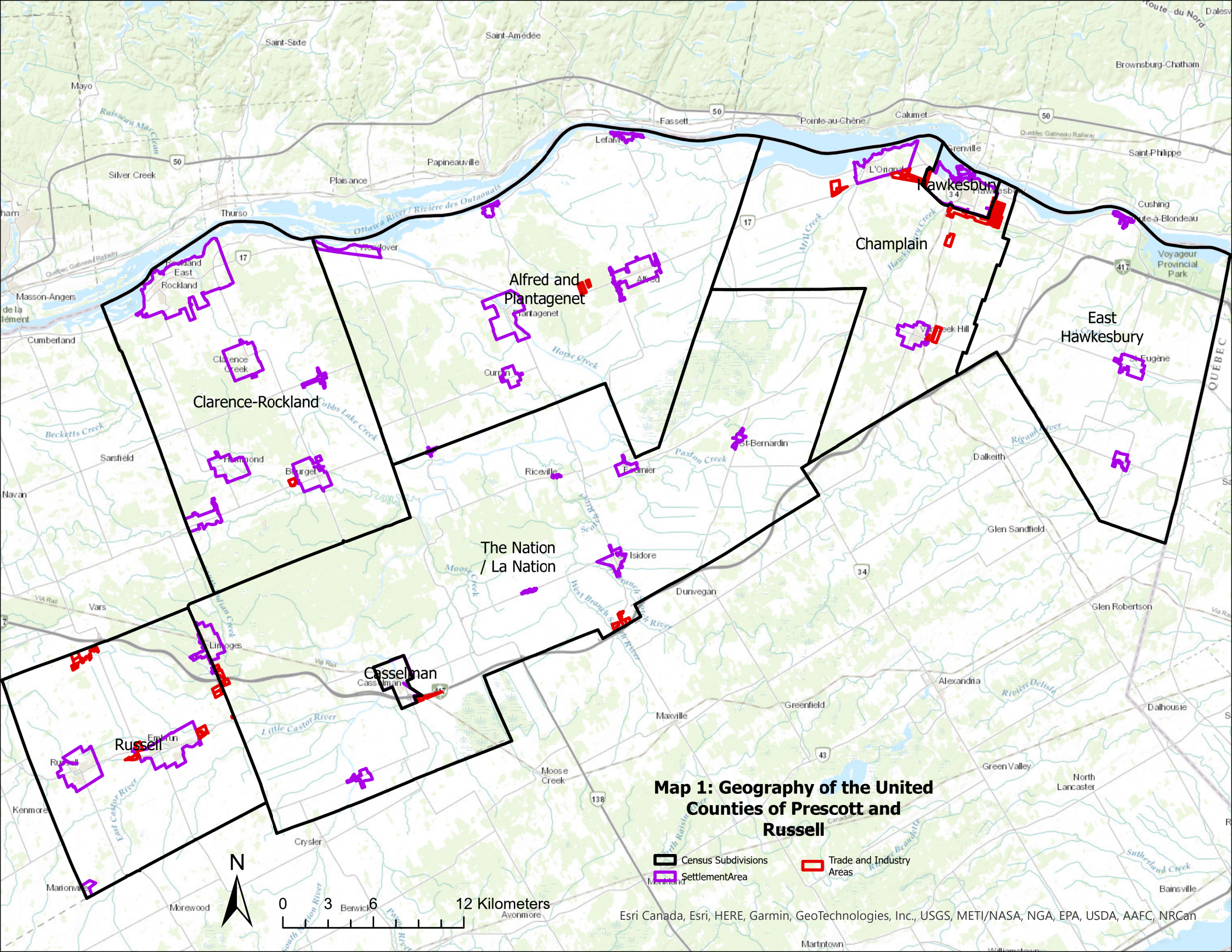
- within settlement areas, sufficient land shall be made available through intensification and redevelopment and, if necessary, designated growth areas (1.1.2).

Policy 1.1.3 of the PPS addresses settlement areas, which are to be the focus of growth and development in municipalities. Settlement areas include urban areas and rural settlement areas within municipalities (such as cities, towns, villages and hamlets) that are either already built-up or include lands which have been designated in an official plan for development over the 25-year planning horizon provided for in Policy 1.1.2 (see above).

PPS Policies 1.1.3.8 and 1.1.3.9 establish rules for expanding settlement area boundaries within and outside the context of a formal comprehensive review should additional lands be required to accommodate the long-term population, housing and employment projections.

Finally, recent changes to the PPS require that planning for housing be done with reference to “market demand” (see policies 1.1.1, 1.1.38, and 1.4.3).

Map 1 identifies the Counties’ Settlement Areas and Trade and Industry Policy Areas.



Map 1: Geography of the United Counties of Prescott and Russell

Census Subdivisions
 Settlement Area
 Trade and Industry Areas



0 3 6 12 Kilometers
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C. 2012 GMS Forecasts are Generally on Target

At the time of the last GMS, completed in 2012 by Hemson, the long-term outlook for the UCPR was for moderate and stable population growth. A “reference” growth forecast projected a permanent resident population of 99,000 for the Counties in 2021. This is slightly higher than what the recently released Statistics Canada Census results show for the Counties’ 2021 population of 98,180.¹ Population growth between 2011 and 2016 was slower than anticipated in 2012; however, growth since 2016 has been faster than previously forecast.

While the population forecasts are on target, a sustained period of job losses after the 2009 recession means that the estimated UCPR employment base for 2021 is lower by 2,570 jobs than was forecast in 2012 (31,600 jobs).

D. Effects of COVID-19

This report was prepared during the COVID-19 pandemic, at a time when much of Ontario appears to have existed the fourth wave of infection and most public health restrictions are being lifted. The pandemic has been the most severe shock to Ontario’s economy since the Great Depression and the short-term impacts in major urban centres have been substantial: reduced population growth during lockdown periods because of curtailed migration; and enormous fiscal pressures on all levels of government.

Municipalities like the UCPR have not been immune to the economic shock of COVID. However, growth in many suburban municipalities, particularly those situated on the fringe of fast-growing metropolitan centres, have seen

¹ The population counts from the 2021 Census were released on February 9, 2022. Population figures above, and throughout this report, include a provision for Census net-undercoverage, i.e. those that were missed or double counted in the Census.

increased population growth through the pandemic period. The factors driving this growth vary somewhat by location:

- in areas at the fringe of large metropolitan areas like the National Capital Region and Greater Toronto Area the increased settlement of early retirees among a Baby Boom generation whose peak age is now 61;
- the conversion of second homes to permanently occupied dwellings in areas where seasonal living and tourism prevail; and
- particularly in the UCPR, the influx of people willing/able to relocate from more densely populated areas on a temporary or permanent basis. Many in-migrants who fall into the latter category have moved to the Counties in response to longstanding housing affordability concerns. The possibility of working remotely is also likely a more recent driver of this in-migration.

The long-term effects of COVID-19 are very uncertain. For the UCPR:

- the pandemic effectively shut down work in major offices for long periods in Ottawa, forcing non-essential businesses to scale down operations or conduct work at home. More working at home could allow people to live further from their place of work and might also affect the tolerance for smaller living spaces that accompany denser development in the Ottawa-Gatineau urban core. Alternatively, it is not at all certain that workers or firms are finding the mass work-from-home experiment attractive or productive.
- the demand for employment land, fueled by demand for goods coming out of the pandemic's initial waves and weaknesses in global supply chains and just-in-time delivery, has soared. This could increase the demand for local storage, distribution, and logistics with good highway access to major urban centres. However, observers remain at odds about how much of the current demand is long-term.

For the purposes of the growth forecasts and land needs assessment in this report it is assumed that a rapid “return to normal” working environment will follow the lifting of restrictions on businesses and the pandemic will not dramatically disrupt longstanding demographic and economic trends. These trends are discussed in more detail in the following sections.

Consistent with the structure of the analysis, the remainder of this report is organized into four sections. The following section sets out the economic and demographic forces that will influence long-term growth in the UCPR. Section 3 describes the growth outlook for the UCPR, in particular the population, housing and employment forecast to 2046. The forecast of the amount, type and location of growth forms the basis of the analysis of the land supply in Section 4. Overall conclusions are made in Section 5.

2. Economic and Demographic Conditions in the UCPR

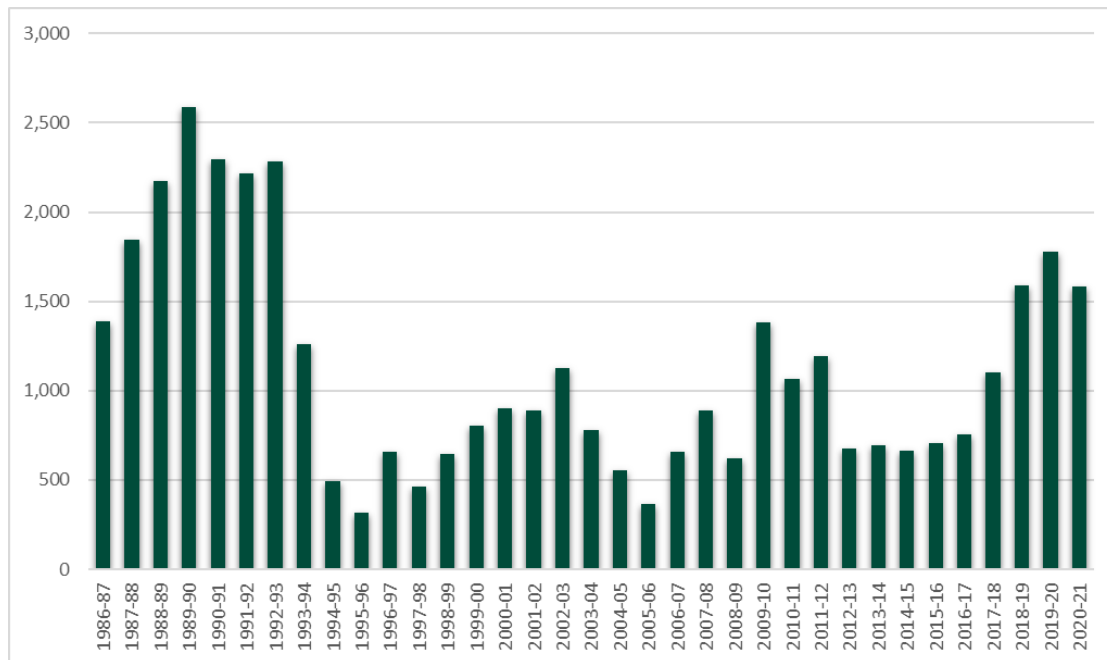
This section sets out the economic and demographic forces that will influence long-term growth in the UCPR.

A. UCPR Primed for Continued Population Growth

The UCPR is located in eastern Ontario, about 55 km east of the City of Ottawa. French is the mother tongue of a significant portion of the population (63% in 2016). The western settlement areas of the Counties, notably those in the faster growing municipalities of Russell and Clarence-Rockland, exhibit a close commuting relationship with Ottawa, being connected to Ottawa through major roadways—Highway 174/County Road 17 along the Ottawa River and Highway 417, the major economic corridor linking Ottawa and Montreal—as well as several bus commuting routes.

Population growth in the Counties has been steady since the early 1970s: on average about 1,100 people added per year, with growth spiking to double that amount in the late 1980s and early 1990s (see Figure 1).

Figure 1: Population Growth in the UCPR, 1986-2021

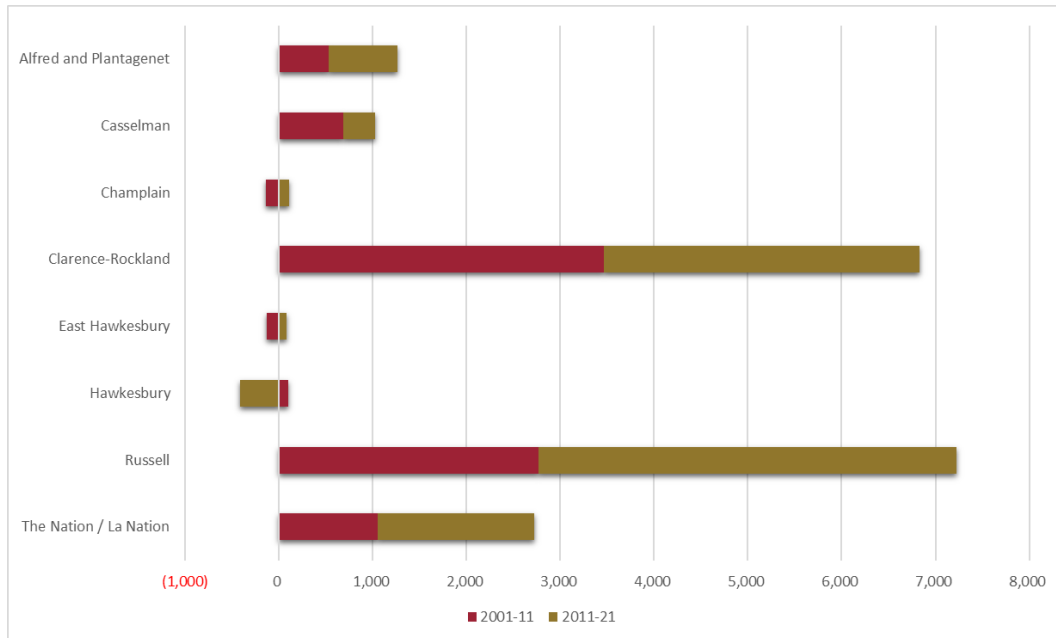


Source: Statistics Canada, Annual Demographic Estimates

Population growth has accelerated since the time of the 2016 Census, with the increased development of residential subdivisions, mainly in Russell and Clarence-Rockland, but also in Alfred-Plantagenet, Casselman, and The Nation (see Figure 2). Indeed, with the exception of Hawkesbury, all municipalities in the UCPR have seen positive population growth in the last decade.²

² Hawkesbury’s population decline occurred between 2011 and 2016. Since 2016, the Town has seen positive population growth.

Figure 2: Total Population Change, 2001 – 2021



Source: Statistics Canada, Annual Demographic Estimates and 2021 Census

The recent surge in population growth is not unique to the UCPR. Similar growth is evident in other county jurisdictions in and around the City of Ottawa such as Lanark, Leeds and Grenville, and Stormont, Dundas and Glengarry.

i. Migration Will Drive Population Growth in the UCPR

Recent data indicates that fertility rates in Ontario are declining and life expectancy continues to increase. Notwithstanding these trends, migration from other parts of Ontario, particularly the National Capital Region, will continue to be the main driver of growth in the UCPR. This type of in-migration has risen sharply in recent years.

Table 1: Natural Increase in the UCPR since 2006-07

	Births	Deaths	Natural Increase
2006-07	788	606	182
2007-08	827	665	162
2008-09	796	583	213
2009-10	867	602	265
2010-11	857	630	227
2011-12	884	630	254
2012-13	925	697	228
2013-14	902	656	246
2014-15	925	768	157
2015-16	920	692	228
2016-17	911	726	185
2017-18	931	808	123
2018-19	846	795	51
2019-20	861	699	162
2006-20	12,240	9,557	2,683

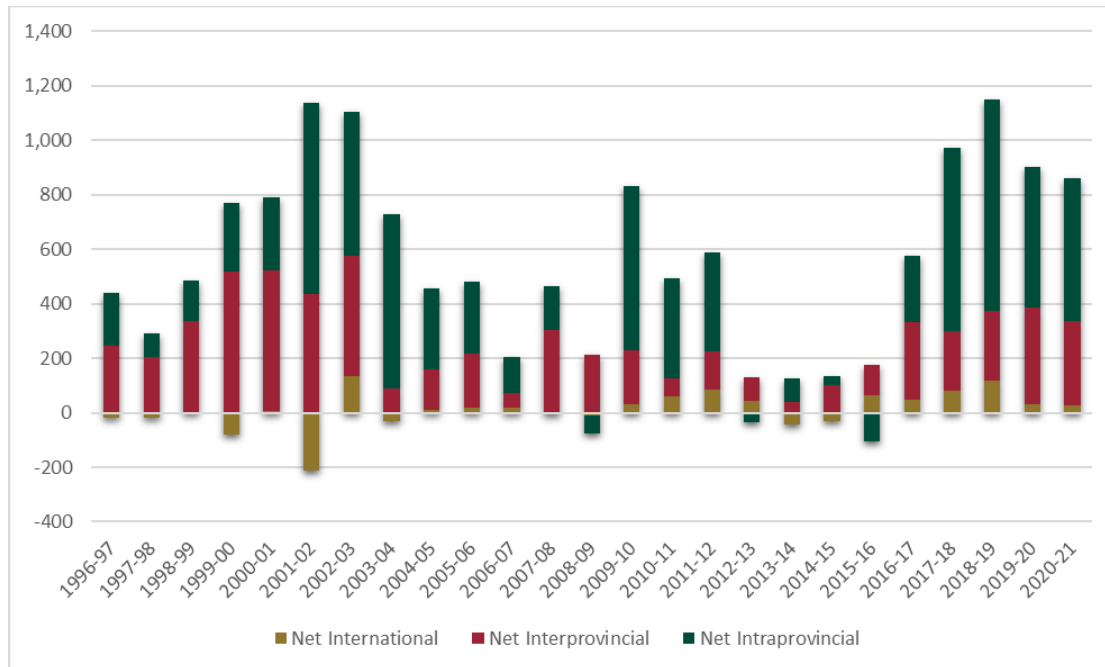
Source: Hemson Consulting, based on Ministry of Finance data

The GMS forecasts are developed using a demographic model that projects future births and deaths by age based on historical trends. Table 1 shows the natural increase of overall population growth since 2006-07. Although births have exceeded deaths throughout the period the rate of natural increase has steadily declined. This is the result of the overall aging of the UCPR population. The aging phenomenon is not unique to the Counties and, like most Ontario communities, will continue throughout the planning period to 2046.

Migration is a key component of the UCPR forecasts as most growth in the Counties arises from migration. With the aging of the population, migration will be increasingly important to the Counties' growth prospects. Figure 3 illustrates the historical pattern of migration in the UCPR. The figure shows that international migration comprises only a small share of overall in-migration. Most migration comes from inter-provincial movements, mainly across the Quebec border, and intra-provincial movements from other parts

of Ontario. The latter movements, mostly the relocation of people to the UCPR from the City of Ottawa and its environs, have fuelled the growth surge that has occurred since 2016.

Figure 3: Historical Migration Pattern in the UCPR



Source: Statistics Canada, Annual Demographic Estimates

The migration pattern set out in Figure 3 is indicative of what the UCPR can expect over the long-term. As such, the GMS forecasts are based on steady and sustained intra-provincial migration and limited inter-provincial migration and immigration.

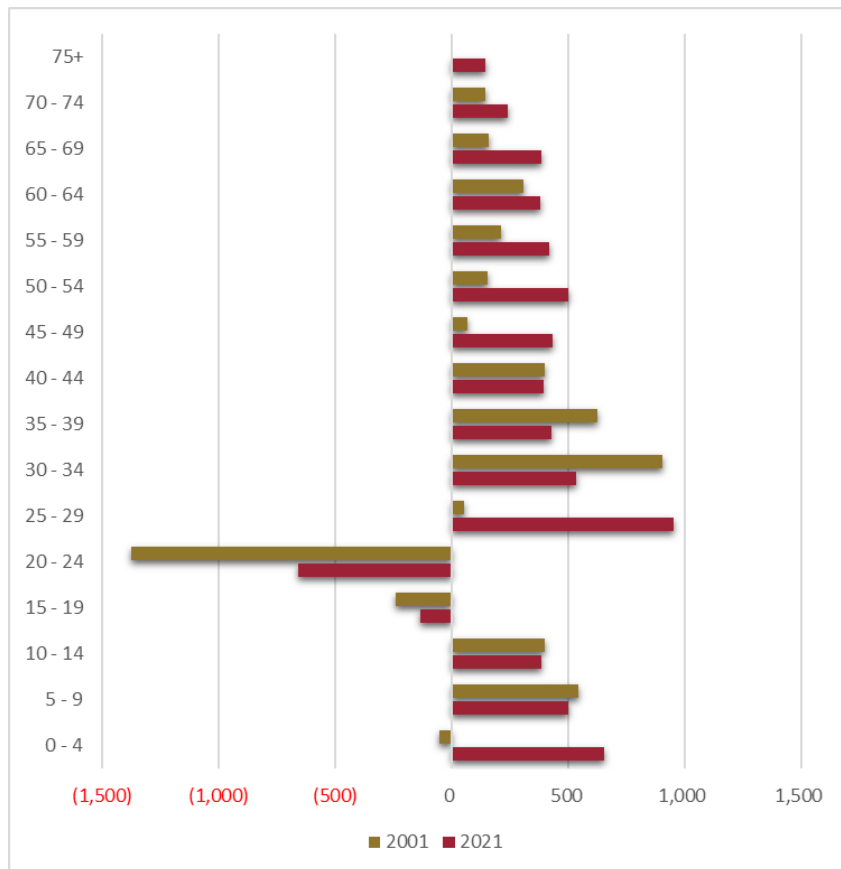
ii. Recent Household and Housing Growth Concentrated in Russell

The amount and type of housing needed in the UCPR is strongly related to the population age structure; an older population forms more households than a younger population. The UCPR labour force is also closely tied to the age structure as the primary determinant of the size and availability of labour is the size of the working age population between about 20 and 65 years of age.

Figure 4 compares the age structure of migrants to the UCPR in 2001 and 2021. The figure shows:

- the significant increase in the number of migrants in their late 20s and early 30s who are forming new households, purchasing their first home, and having their first child;
- the increase in the number of migrants in their late 40s and older; and
- the continued out-migration of young adults in their late teens and early 20s seeking job training, post-secondary education, and employment in larger urban centres like Ottawa and Montreal.

Figure 4: UCPR Age of Migrants, 2001 and 2021



Source: Statistics Canada, 2001 Census; Hemson forecasts (for 2021)

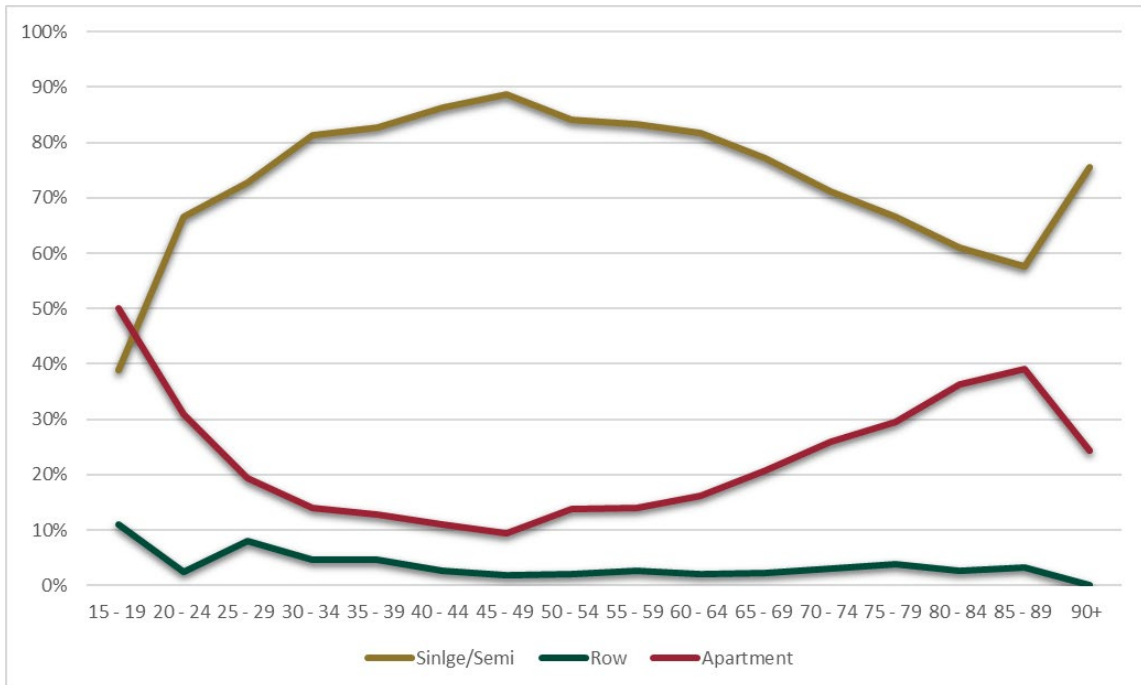
The Counties will need to ensure that they can provide a suitable range and mix of housing to meet the age profile of these in-migrants. The overwhelming preference by new homebuyers in the short and medium-term will be for single detached “family” homes. This housing form remains more affordable in the UCPR than in Ottawa-Gatineau and very attractive for households with children wishing to commute to jobs in the urban centres to the west.

Over the long-term, as the UCPR continues to age and its settlement areas develop and mature, the Counties will need to ensure that a greater diversity of housing is available. This could include more affordable row housing for family households, and a range of higher density apartment forms to cater to older adults wishing to downsize, single person households of people working from home, and low income groups.

The implications for future housing demand in the UCPR can be seen by current (2016) preferences for different housing types by age of household head. Figure 5 shows that the demand for medium density housing in UCPR is high for those in their 20s and early 30s and begins to rise significantly in older adulthood. The current demand for apartments is low, even among the elderly. This suggests that:

- older adult households in the UCPR tend to remain in their single detached homes longer than in more urbanized communities; and
- older adults that do downsize to an apartment leave the Counties to do so.

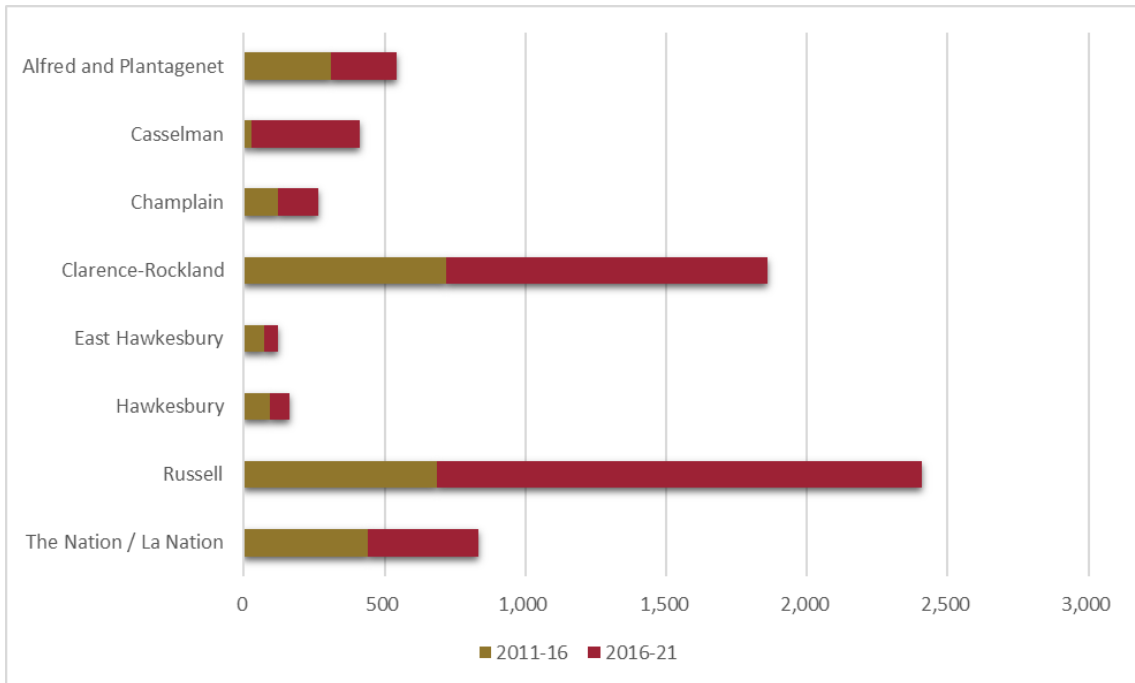
Figure 5: Housing Occupancy Patterns in the UCPR, 2016



Source: Statistics Canada, 2016 Census

Three-quarters of all new housing constructed in the UCPR since 2011 has been in Russell and Clarence-Rockland, the municipalities closest to Ottawa (see Figure 6). Housing growth has increased over the recent decade in Casselman, Champlain, and The Nation, with the number of building permits for new homes in Casselman increasing from 25 between 2001 and 2016 to nearly 400 between 2016 and 2021. Housing growth has been slower in more rural and eastern municipalities such as Alfred and Plantagenet, Hawkesbury, and East Hawkesbury.

Figure 6: Number of Residential Building Permits Issued

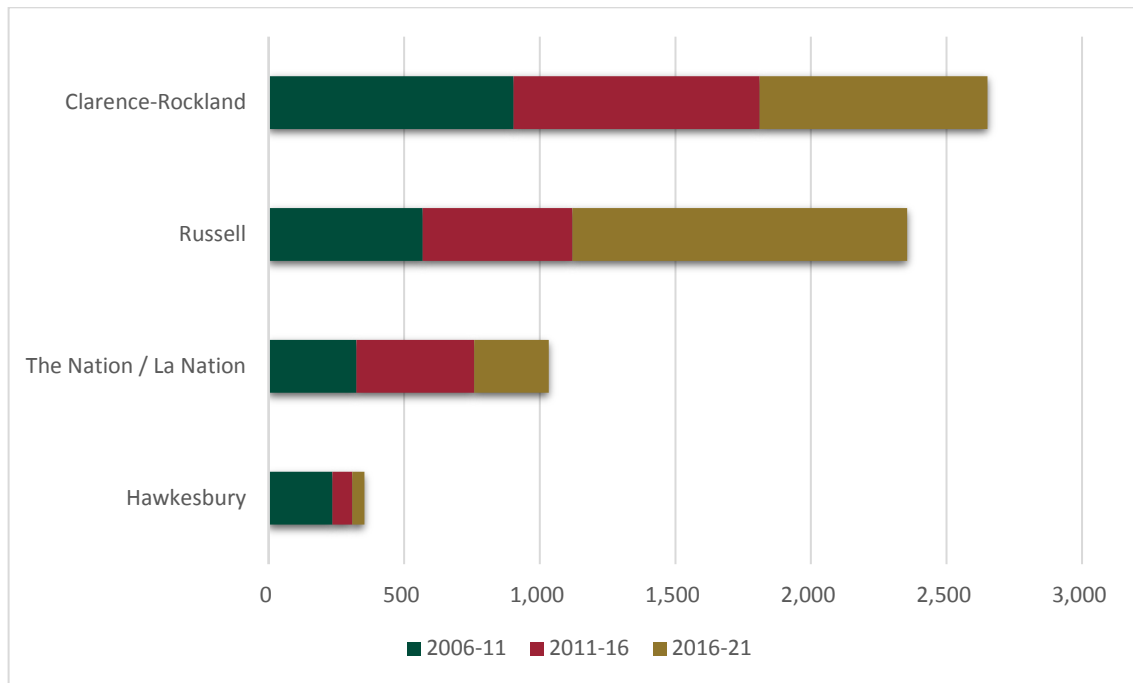


Source: Statistics Canada, Building Permits

In recent years there has been significant pressure for new housing in Russell, where the Russell and Embrun urban settlement areas are situated. The GMS forecasts recognize the locational advantage of these settlement areas—easy access to Highway 417 for example—and their ability to offer full service “complete” communities to the types of migrants wishing to settle in the UCPR.

As with the building permit information, Figure 7 shows that Russell and Clarence-Rockland have been the main location for new residential construction in the last 15 years. Indeed, the recent population growth surge in the County owes itself mostly to the rapid completion of homes in those municipalities. This concentration of growth in Russell and Clarence-Rockland, especially in Russell, may be expected to continue, certainly in the short and medium-term.

Figure 7: Housing Completions in the UCPR



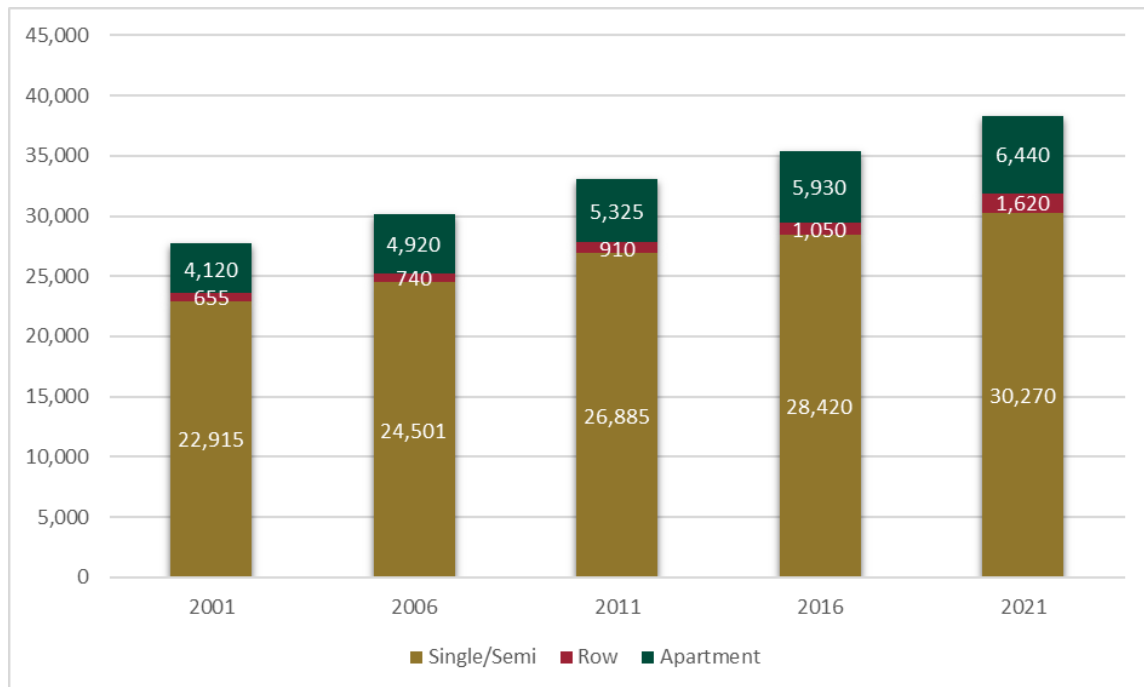
Source: CMHC, Housing Completions (data unavailable for more rural municipalities)

The housing market preference in the UCPR has been for single detached unit forms—over the last 20 years more than 80% of all homes in the Counties have been single detached (see Figure 8). However medium density (row houses and other multiple dwelling units) and higher density forms (apartments) make up a substantial component of new housing construction: more than 2,000 apartments and 1,000 row houses have been built since 2001 and there is evidence of increased interest in row house forms, particularly in Russell.

The County may be expected to increase the diversity of new housing over the planning period in order to address shifts in demand brought about by the changing population age structure (see above) and PPS policies that promote healthy, livable, and safe communities, in part by:

accommodating an appropriate affordable and market-based range and mix of residential types (including single-detached, additional residential units, multi-unit housing, affordable housing and housing for older persons)... (Policy 1.1.1. b)).

Figure 8: Historical Housing Mix in the UCPR 2001-2021



Source: Statistics Canada, 2001-2016 Censuses; Hemson forecast (for 2021)

B. Conditions are Favourable for Sustained Employment Growth

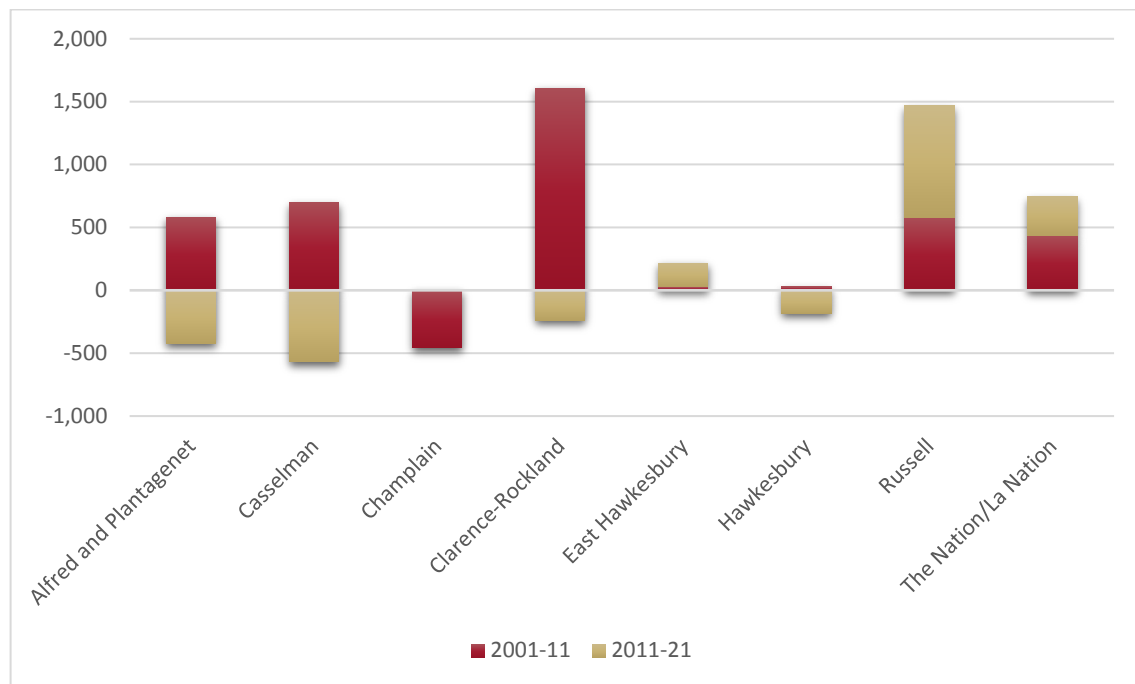
The long-term economic outlook for the UCPR is positive. Municipalities across the Counties offer a range of locational attributes that will continue to be attractive to new and existing businesses including, in the short-term, a supply of serviced and unserviced designated trade and industry lands. Although the UCPR population will be older in 2046, the rate of aging will be slower than in other regions of Ontario allowing for high levels of labour force participation supporting strong economic growth.

i. Recent Employment Growth Has Been Sporadic

The GMS forecasts adopt the Census definition of employment by place of work: they record where people work rather than their place of residence. Employment in the UCPR has been uneven in recent years and, as noted in the Introduction, current employment is lower than anticipated by the 2012

GMS. Most employment growth in the last decade has taken place in Russell and Clarence-Rockland (see Figure 9). Russell and The Nation are the only lower-tier municipalities that have experienced positive employment growth in each 5 year census period since 2001.

Figure 9: Historical Place of Work Employment Change in the UCPR



Source: Statistics Canada, Census of Canada 2001-2016; Hemson forecasts (for 2021)

The historically fluctuating employment growth in the UCPR can be attributed in part to the long recovery from job losses arising from the 2009 recession and, to a lesser degree, the disruptions of COVID-19. Data discontinuities arising from the 2011 National Household Survey have also undermined the accuracy of information on the local employment distribution. Looking forward, the GMS anticipates a faster rate of job growth in the Counties, reflecting the needs of a growing local population and the servicing and development of key employment areas on designated trade and industry lands, particularly in the 417 Industrial Park in Russell.

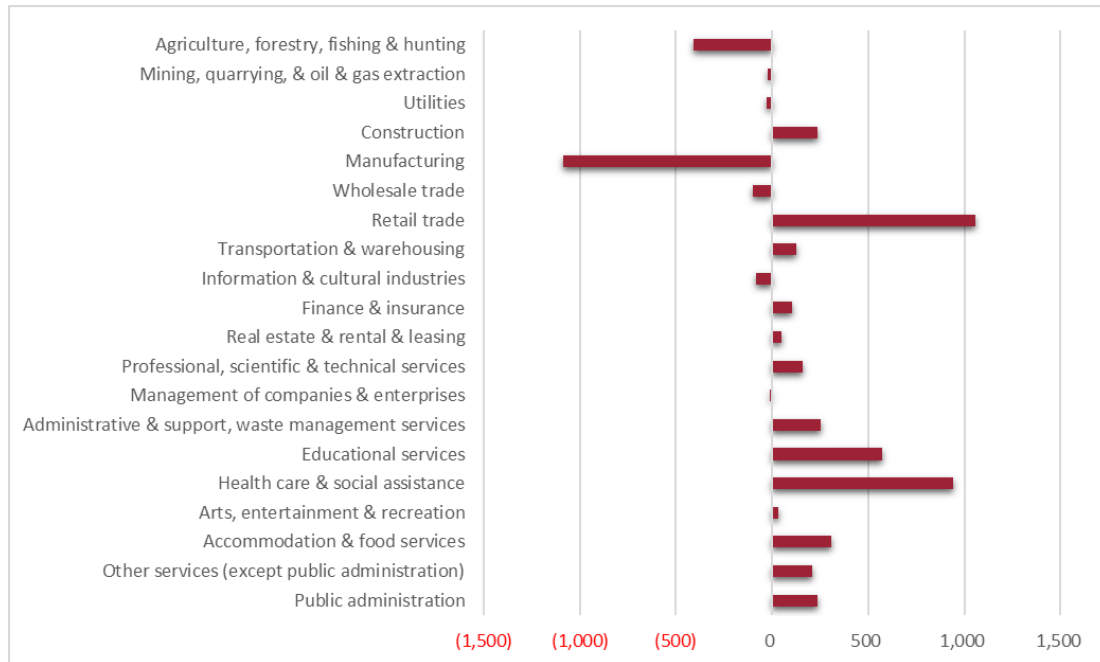
ii. UCPR Economy is Closely Linked to Ottawa

It is important for the accuracy and credibility of the forecasts that assumptions be made about the economic future of the UCPR.

Notwithstanding the current pandemic situation, the economic outlook assumes that most demographic, social, and economic change after COVID-19 restrictions are lifted will be gradual across the overall geographic and population base. In general, the UCPR is anticipated to experience rates of long-term economic growth sufficient to absorb the expanding labour force created through migration.

Figure 10 shows the change in the UCPR place of work employment by sector between the 15 year period 2001 and 2016. The figure shows that most job growth was in service producing sectors, particularly retail trade, educational services, and health care and social assistance. The Counties experienced job losses in manufacturing and primary industries such as agriculture. The gradual shift away from employment in goods production, including in the manufacturing sector, towards employment in services, is a longstanding trend and mirrors similar employment patterns in the City of Ottawa and across the Province (Ontario lost more than 280,000 manufacturing jobs over the period, of which 7% were in the City of Ottawa and less than 0.5% were in the UCPR).

Figure 10: Place of Work Employment Change in the UCPR, 2001-16



Source: Statistics Canada, Census of Canada 2001 and 2016

The last two decades have seen increasingly diverse economic activity on land designated for employment uses (employment areas), even where original industries have ended operations. Many growing economic sectors in the UCPR, whether goods producing sectors such as construction, or sectors that handle and distribute goods (transportation, warehousing, logistics) or provide “high tech” or support services (such as professional, scientific, technical, and administrative services), are choosing to operate out of single storey facilities on large, segregated industrial or business park sites. Such land-extensive sites offer easy access to major transportation routes, the opportunity to build large buildings for storing goods and equipment, and the necessary road design for turning and unloading trucks. As such, the need for employment lands remains high, despite the loss of manufacturing jobs.

iii. Commuting Trends

One of the most important considerations with respect to the growth forecast for the UCPR is the economic and urban structural relationship

between it and the broader regional economy centred on Ottawa and Gatineau. It is this relationship that explains the amount and distribution of growth that has occurred in recent years.

The UCPR is an exporter of labour (see Table 2). Moreover, only about half of the resident employed labour force of 32,000 actually lives and works within the Counties; this share drops to about one third of the resident employed labour force in the western municipalities of Russell and Clarence-Rockland, where a significant number of workers commute to jobs in Ottawa and Gatineau.

Table 2: Commuting Patterns of Lower-Tier Municipalities in UCPR, 2016

	Live and Work	Commute-In	Commute-Out	Net Commuting
Alfred and Plantagenet	810	660	2,780	(2,120)
Casselman	460	1,210	1,115	95
Champlain	945	1,645	2,640	(995)
Clarence-Rockland	2,635	1,750	7,720	(5,970)
East Hawkesbury	190	260	1,025	(765)
Hawkesbury	2,125	3,835	1,375	2,460
Russell	1,485	1,855	5,830	(3,975)
The Nation / La Nation	840	1,180	4,935	(3,755)
UCPR	9,490	12,395	27,420	(15,025)

Source: Statistics Canada, 2016 Census

As housing affordability concerns and increased work at home patterns persist, this commuting relationship will continue to drive housing demand in the Counties leading to development pressures in Russell, Clarence-Rockland, and The Nation. Much of the demand will be for housing for commuter households, particularly young families with children. Over the longer-term, as settlement areas like Russell, Embrun, and Rockland grow and diversify, opportunities for people to live and work locally may be expected to increase.

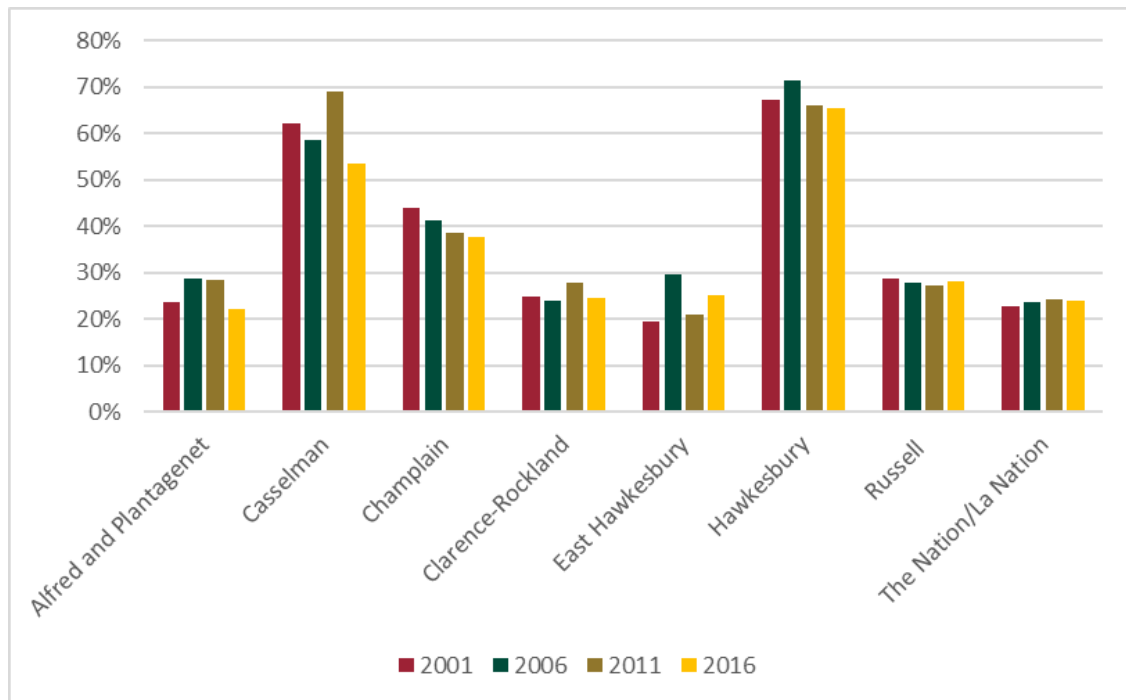
The opportunity for employment growth on designated trade and industry areas will also increase particularly in areas that are easily accessed from Highway 417 and are on full municipal water and wastewater services.

iv. Activity Rates

The activity rate is the ratio of population to employment in a location. It serves as a useful, though crude, indicator of how “complete” a community is and whether its residents have opportunities to work near where they live. The GMS forecasts use activity rates to “balance” the distribution of people and jobs to 2046, recognizing that rural municipalities tend to have lower activity rates than urban municipalities.

Figure 11 shows the activity rates for each municipality between 2001 and 2016. Hawkesbury and Casselman, which have very few rural lands, have the highest activity rates. Activity rates in most municipalities have been steady, except for Champlain where the ratio of jobs to people has fallen. At below 30%, the activity rates for Russell and Clarence-Rockland are typical of suburban communities with a high degree of out-commuting. The GMS offers an opportunity to direct employment growth to those municipalities to ensure they remain “complete” communities over the long-term.

Figure 11: Activity Rates within the UCPR



Source: Statistics Canada, 2001-2016 Census

3. Growth Outlook

This section describes the growth outlook for the UCPR, in particular the population, housing and employment forecast to 2046. The forecast of the amount, type and location of growth will form the basis of the analysis of the land supply in the next section.

A. County-Wide Population Forecasts

The GMS forecasts are based on standard cohort-survival models that incorporate assumptions about fertility, mortality and migration. The population change for the UCPR results from two processes: natural increase and net migration. The cohort survival models are structured using age groups (cohorts). Age and sex-specific fertility, mortality and migration rates are then applied to the 2016 base population cohorts in annual increments out to 2046 to generate results.

- Natural increase is the difference between the number of births and the number of deaths in a population over a forecast period. To project the number of births and deaths in the future, assumptions about future fertility rates by age of mother and mortality by age and sex are applied to yield the number of births and deaths in each cohort. The assumptions used in this step of the forecast are consistent with those used by the Ministry of Finance in its annual Population Projections.
- Net migration represents the cumulative result of all migration movements in and out of the UCPR. There are three major components of migration: international migration, which is the movement of people between the UCPR and other countries; inter-provincial migration, which is the movement of people between the UCPR and other Canadian provinces (including over the Quebec border); and intra-provincial migration, which is the movement of people between the UCPR and other

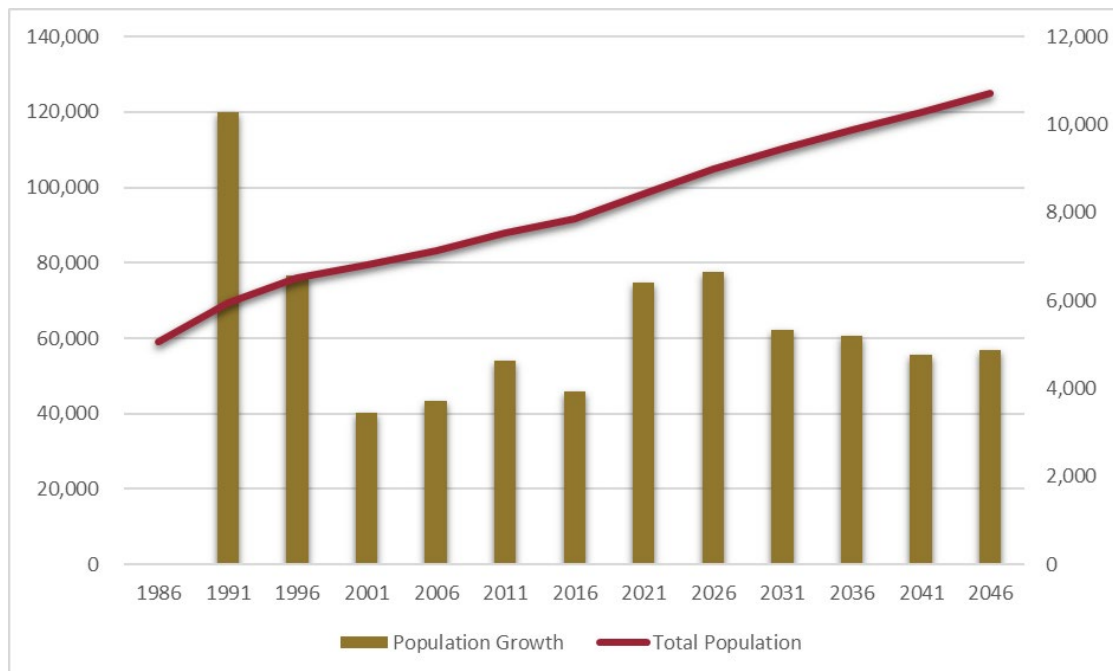
parts of Ontario. Intra-provincial in-migration will be main driver of population growth in the Counties.

On a County-wide basis, population is forecast to grow to 125,000 by 2046 (see Figure 12). This represents growth of 26,820 over the 25 year planning period from 2021 at an average annual growth rate of 1%. The forecast is:

- slightly higher than the population of 124,200 produced by the Ministry of Finance in its 2021 Population Projections; and
- very similar (1,400 less in 2036) to that produced for the 2012 GMS.

Growth will be more rapid over the first 10 years of the planning period, reflecting in part the current population surge in the UCPR arising from the relocation of family forming household seeking more affordable single detached homes within commuting distance of jobs in Ottawa. The growth rate will slow over the longer-term, reflecting the overall aging of the population (see Table 3).

Figure 12: Total Population Growth in the UCPR to 2046



Source: Hemson Consulting forecasts; Statistics Canada Census (for 1986-2021)

Table 3: Population in the UCPR, 1986 – 2046

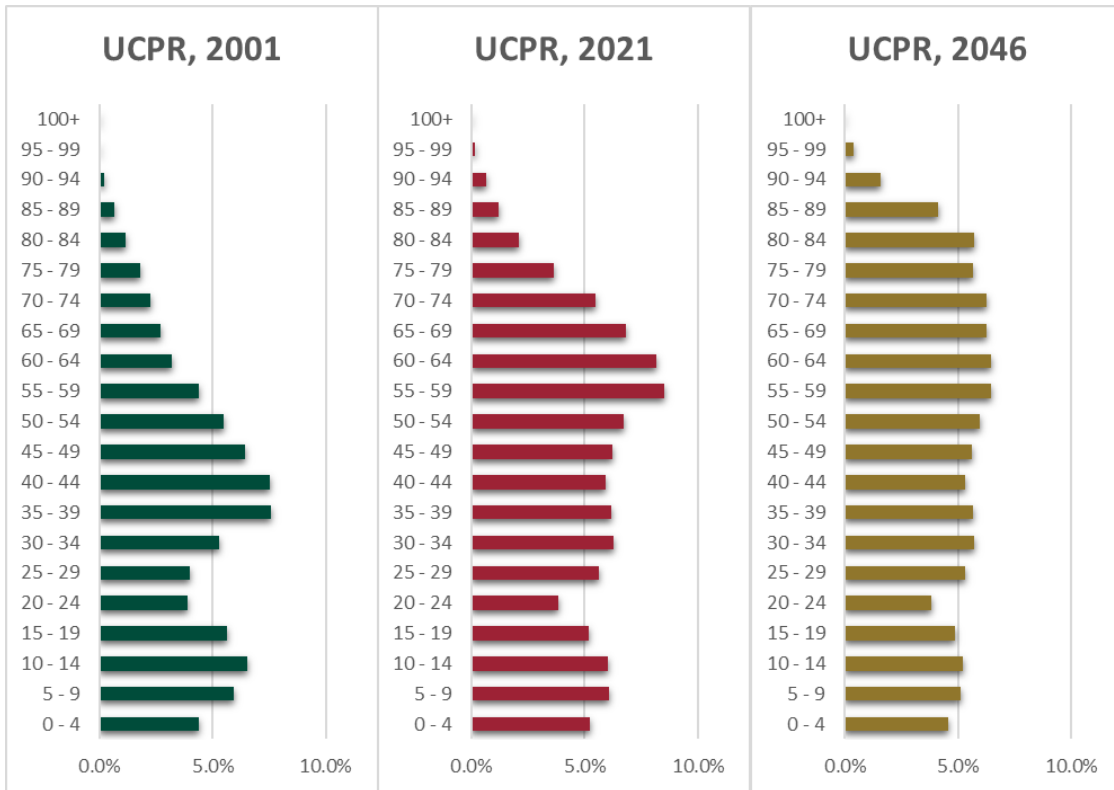
Census Year	Total Population	Population Growth	Annual Growth Rate
1986	59,160		
1991	69,450	10,290	3.3%
1996	76,020	6,570	1.8%
2001	79,480	3,460	0.9%
2006	83,210	3,730	0.9%
2011	87,830	4,620	1.1%
2016	91,760	3,930	0.9%
2021	98,180	6,420	1.4%
2026	104,830	6,650	1.3%
2031	110,170	5,340	1.0%
2036	115,360	5,190	0.9%
2041	120,130	4,770	0.8%
2046	125,000	4,870	0.8%
1991-2021		28,730	1.2%
2021-2046		26,820	1.0%

Source: Hemson Consulting Ltd.

1: Total population includes Census Net Undercoverage

The UCPR population will age gradually over the next 25 years, with the number of people over 60 rising from 28% of the population in 2021 to 36% in 2046. Figure 13 shows increased “flattening” of the population between 2001, 2021, and 2046. The largest age cohorts increase from 35 - 44 in 2001, to 55 - 64 in 2021, to the 50+ age groups in 2046. In 2046, there will be more than 29,000 people 70+, compared to only 6,000 in 2001. A greater range and mix housing will be required and is anticipated by the housing forecasts below.

Figure 13: UCPR Population Age Structure 2001-2046



Source: Hemson Consulting forecasts; Statistics Canada Census (for 2001)

Table 4 shows that the number of households in the UCPR will increase by 13,160 between 2021 and 2046. The average annual growth rate of 1.2% is slightly higher than the population growth rate reflecting the continued decline the average persons per unit over time. As with the population forecast, growth will be more rapid in the first 10 years of the planning period and will slow over the longer-term. It is noted that the household forecast is higher for 2036 than projected in the 2021 GMS, mainly due to the current housing construction boom.

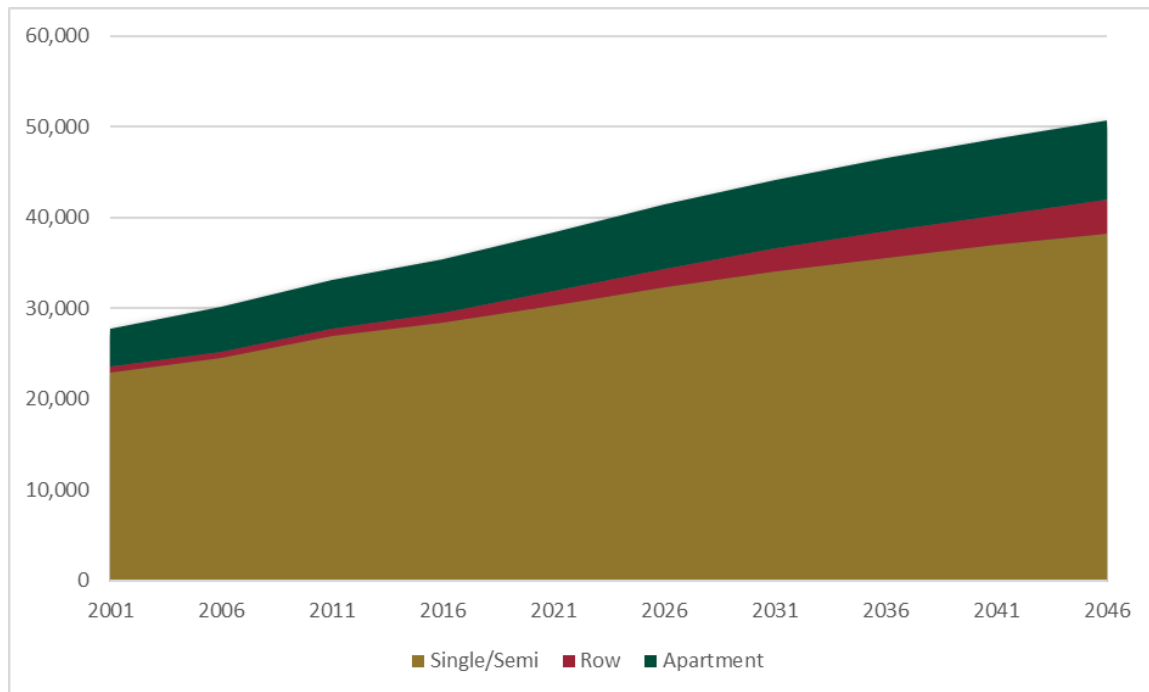
Table 4: Household Growth in the UCPR, 1986 – 2046

Census Year	Total Households	Household Growth	Annual Growth Rate
1986	18,845		
1991	23,085	4,240	4.1%
1996	26,000	2,915	2.4%
2001	27,680	1,680	1.3%
2006	30,070	2,390	1.7%
2011	33,130	3,060	2.0%
2016	35,400	2,270	1.3%
2021	38,340	2,940	1.6%
2026	41,420	3,080	1.6%
2031	44,080	2,660	1.3%
2036	46,510	2,430	1.1%
2041	48,670	2,160	0.9%
2046	50,700	2,030	0.8%
1991-2021		15,255	1.7%
2021-2046		12,360	1.1%

Source: Hemson Consulting forecasts; Census of Canada (for 1986-2021)

The GMS assumes that the mix of housing in the UCPR will need to shift in order to satisfy the market demand arising from the changing population age structure and to address planning policies that promote a more compact urban form, transit-supportive communities, and the efficient use of land. Historically, more than 70% of all housing growth in the UCPR has been in the form of single detached units. The GMS forecasts assume that share to be just less than 65% of total housing growth between 2021 and 2046. By 2046, nearly 40% of all newly constructed units will be in higher density forms. The effect of the gradual shift towards higher density forms on the overall housing stock in the Counties is shown in Figure 14.

Figure 14: Forecast of Structure Types within the UCPR, 2001 - 2046



Source: Hemson Consulting forecasts; Statistics Canada, Census (for 2001-2016)

B. Allocation of Growth to Lower-Tier Municipalities

The distribution of future population growth considers where growth is directed through planning policies and the ability of lower-tier municipalities in the UCPR to accommodate different types of housing growth. The first step in the distribution process is the translation of the population forecast into a forecast of households based on age-specific household formation rates (or headship rates). These rates reflect the propensity of different household and family types to occupy different housing by type. For forecasting purposes, 2016 age-specific household formation rates are assumed to continue to decline somewhat before returning to 2016 levels by 2046. A summary of 2016 headship rates is provided in Table 5.

Table 5: Headship Rates by Structure Type in the UCPR, 2016

YEAR:	2016												
Households by Age of Household Head			Occupied Dwelling Units By Structure Type										
	Census Pop	Headship Rate	Occupied Households	Single Detached		Semi-Detached		Row House		Apartments		Duplex	
				Rate	Units	Rate	Units	Rate	Units	Rate	Units	Rate	Units
15 - 19	5,095	1.8%	90	27.8%	25	11.2%	10	10.8%	10	50.3%	45	0.00%	0
20 - 24	4,735	13.0%	615	57.8%	355	9.0%	55	2.4%	15	20.4%	126	10.48%	64
25 - 29	4,805	40.4%	1,940	63.7%	1,236	9.6%	186	7.7%	150	11.6%	225	7.41%	144
30 - 34	5,035	48.9%	2,460	76.3%	1,876	5.1%	126	4.5%	111	9.1%	223	5.04%	124
35 - 39	5,220	52.4%	2,735	75.5%	2,066	7.5%	206	4.4%	121	8.7%	238	3.81%	104
40 - 44	5,615	53.8%	3,020	78.7%	2,376	7.7%	231	2.6%	77	7.2%	216	3.94%	119
45 - 49	6,195	55.5%	3,440	83.3%	2,867	5.4%	186	1.8%	63	6.3%	216	3.17%	109
50 - 54	8,020	54.4%	4,365	78.9%	3,442	5.5%	241	2.0%	87	7.6%	332	6.02%	263
55 - 59	7,605	55.8%	4,240	78.8%	3,342	5.0%	211	2.5%	106	9.3%	392	4.44%	188
60 - 64	6,535	57.2%	3,735	76.6%	2,862	5.6%	211	2.1%	77	10.0%	372	5.71%	213
65 - 69	5,415	59.2%	3,205	71.5%	2,291	6.4%	206	2.1%	68	15.5%	496	4.49%	144
70 - 74	4,055	58.1%	2,355	68.0%	1,601	4.9%	116	2.9%	68	20.0%	472	4.21%	99
75 - 79	2,545	61.9%	1,575	64.5%	1,016	4.5%	70	3.7%	58	21.4%	337	5.98%	94
80 - 84	1,740	53.7%	935	55.1%	515	5.9%	55	2.6%	24	29.0%	271	7.42%	69
84 - 89	1,030	44.7%	460	54.4%	250	3.3%	15	3.2%	15	33.8%	155	5.39%	25
90 +	695	32.4%	225	66.7%	150	8.9%	20	0.0%	0	20.0%	45	4.41%	10
TOTAL	74,340	47.6%	35,395	74.2%	26,270	6.1%	2,145	3.0%	1,050	11.8%	4,160	5.00%	1,770

Source: Statistics Canada, 2016 Census

In the second step of the distribution process, the household forecast is translated into a forecast of housing by type—single and semi-detached houses; row houses; and apartment buildings. The housing forecast is then distributed to the lower-tier municipalities within the UCPR based on observed market trends, age specific occupancy patterns, the effects of planning policies, the land available to support development, and the capacity of each municipality to accommodate the forecast growth. Planning staff at the lower-tier municipalities were consulted on the distribution of the forecasts.

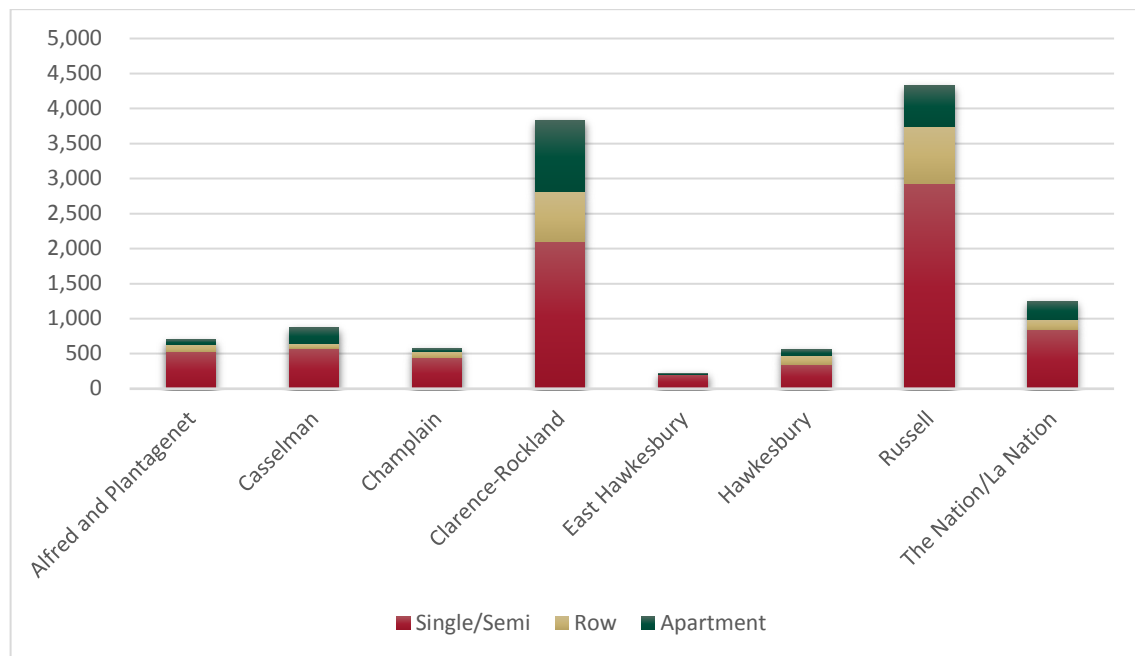
The UCPR currently has about 1,285 hectares of designated vacant residential land within its urban and rural settlement areas. These vacant lands are not evenly distributed: one third are located within Clarence-Rockland; conversely, Casselman contains only 5% of the total supply (details on the distribution of vacant lands are provided in the appendices). Attention has been paid to directing growth to the 30 settlement areas:

- Urban Policy Areas, where full municipal water and wastewater services are available and which will accommodate the majority of future housing growth; and
- Community Policy Areas, which are more rural settlements.

This is in keeping with PPS policies that direct growth to settlement areas, in part through intensification and redevelopment.

The allocation of housing growth by type to the lower-tier municipalities is shown in Figure 15. Most housing growth, including 70% of all growth in apartment forms, will take place in Russell and Clarence-Rockland. However, all municipalities will experience growth, some substantially relative to historical trends.

Figure 15: Housing Growth by Type by Municipality 2021 - 2046



Source: Hemson Consulting

The allocation of housing growth by five-year period historically and over the forecast period is set out in Tables 7 and 8. Development in Russell and Clarence-Rockland exhibit a surge in construction to 2031 in keeping with

recent trends. Over the longer-term, growth is more widely distributed and moderate.

Table 6: Historical Housing Growth by Municipality, 2001 - 2021

Census Year	2001	2006	2011	2016	2021	2001-2021 Compound Annual Growth Rate
Alfred and Plantagenet	3,190	3,380	3,730	3,970	4,080	1.2%
Casselman	1,110	1,240	1,430	1,440	1,580	1.8%
Champlain	3,280	3,450	3,520	3,700	3,750	0.7%
Clarence-Rockland	6,700	7,590	8,640	9,330	10,100	2.1%
East Hawkesbury	1,290	1,320	1,310	1,370	1,430	0.5%
Hawkesbury	4,440	4,730	4,950	4,960	5,080	0.7%
Russell	4,040	4,730	5,280	5,870	7,230	3.0%
The Nation/La Nation	3,660	3,730	4,270	4,760	5,100	1.7%
UCPR	27,710	30,170	33,130	35,400	38,350	1.6%

Source: Statistics Canada, Census 2001-2016; Hemson projection based on CHMC data (for 2021)

Table 7: Forecast Housing Growth by Municipality, 2021 - 2046

Census Year	2021	2026	2031	2036	2041	2046	2021-2046 Compound Annual Growth Rate
Alfred and Plantagenet	4,080	4,250	4,390	4,530	4,660	4,780	0.6%
Casselman	1,580	1,790	1,980	2,150	2,310	2,450	1.8%
Champlain	3,750	3,880	3,990	4,110	4,220	4,330	0.6%
Clarence-Rockland	10,100	11,120	11,990	12,710	13,350	13,930	1.3%
East Hawkesbury	1,430	1,480	1,530	1,570	1,610	1,650	0.6%
Hawkesbury	5,080	5,220	5,340	5,460	5,560	5,650	0.4%
Russell	7,230	8,280	9,210	10,080	10,850	11,550	1.9%
The Nation/La Nation	5,100	5,390	5,630	5,890	6,110	6,360	0.9%
UCPR	38,350	41,410	44,060	46,500	48,670	50,700	1.1%

Source: Hemson Consulting

The population growth for each lower-tier municipality is derived from the housing allocations in Table 7. Tables 8 and 9 show the historical and forecast population by Census period for each municipality between 2001 and 2046. Although Russell and Clarence-Rockland account for 67% of all population growth, every municipality is forecast to experience growth and at a faster rate than historical trends.

Table 8: Historical Population Growth by Municipality, 2001 – 2021

Census Year	2001	2006	2011	2016	2021	2001-2021 Compound Annual Growth Rate
Alfred and Plantagenet	8,940	8,980	9,460	9,920	10,190	0.7%
Casselman	3,030	3,420	3,730	3,650	4,070	1.5%
Champlain	8,930	9,010	8,820	8,910	8,860	0.0%
Clarence-Rockland	20,390	21,570	23,850	25,240	27,270	1.5%
East Hawkesbury	3,550	3,500	3,430	3,370	3,500	-0.1%
Hawkesbury	10,730	11,280	10,850	10,460	10,380	-0.2%
Russell	12,910	14,410	15,680	17,010	20,160	2.3%
The Nation/La Nation	11,020	11,040	12,000	13,210	13,750	1.1%
UCPR	79,500	83,210	87,820	91,770	98,180	1.1%

Source: Statistics Canada, 2001-2021 Census

Table 9: Forecast Population Growth by Municipality, 2021 – 2046

Census Year	2021	2026	2031	2036	2041	2046	2021-2046 Compound Annual Growth Rate
Alfred and Plantagenet	10,190	10,430	10,650	10,890	11,120	11,400	0.4%
Casselman	4,070	4,390	4,770	5,150	5,490	5,820	1.4%
Champlain	8,860	9,170	9,310	9,500	9,690	9,930	0.5%
Clarence-Rockland	27,270	28,990	30,760	32,230	33,600	34,930	1.0%
East Hawkesbury	3,500	3,580	3,650	3,720	3,790	3,880	0.4%
Hawkesbury	10,380	10,950	11,100	11,260	11,420	11,620	0.5%
Russell	20,160	22,890	25,060	27,110	28,960	30,740	1.7%
The Nation/La Nation	13,750	14,430	14,870	15,500	16,060	16,680	0.8%
UCPR	98,180	104,830	110,170	115,360	120,130	125,000	1.0%

Source: Hemson Consulting

C. County-Wide Employment Forecasts

The forecast method applies three factors to generate the employment forecast from the population forecast:

- participation rates, to derive the labour force from the resident population;
- unemployment rates, to determine what proportion of the resident labour force is employed; and

- net in-commuting, which represents the number of jobs occupied by non-residents through in-commuting and the number of jobs that are undertaken in other areas through out-commuting.

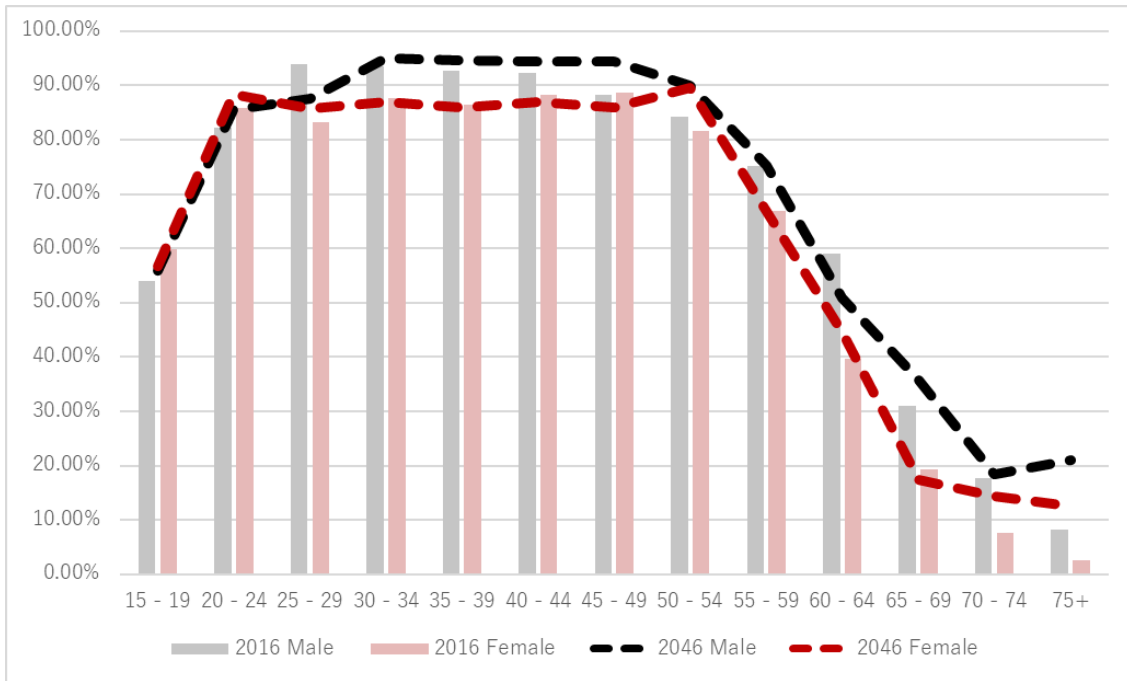
Participation rates are the share of the total working age population that participate in the labour force (either employed or seeking employment). Applying participation rates to the population forecast results in the total labour pool available to fill jobs in the future. The starting point for the forecast of participation rates is the 2016 Census which provides participation rates for males and females by five year age group from 15–19 onwards.

Notwithstanding changes arising from COVID-19 and other short-term economic cycles, participation rates for some age groups are assumed to remain near current levels throughout the forecast period. Observed trends of reduced labour force participation rates among young people, moderate increases in labour force participation among older age groups, particularly women overall and men in their late 60s who are delaying retirement, are projected to continue through the forecast period.

The assumed changes in participation rates are consistent with Statistics Canada, *The Labour Force in Canada and its Regions: Projections to 2036*, 2019.

As seen in Figure 16, the labour force participation rates for the UCPR in 2016 and 2046 indicate that participation in the future workforce will not be too different than that of today. However, because of the older age profile of the population there will be far fewer workers relative to the population in 2046.

Figure 16: Labour Force Participation Rates in the UCPR, 2016 and 2046



Source: Hemson based on Statistics Canada data

Unemployment rates account for the portion of the labour force that is not working. They have less of an influence on the employment forecast than participation rates and usually fluctuate within a narrow range over the long-term. The UCPR’s unemployment rate in 2016 was 5.3%, slightly lower than the Provincial average, and the current forecasts are being completed during the COVID-19 pandemic which has triggered a sharp increase in unemployment. Unemployment is assumed to return to 2016 levels very quickly and stabilize to 2046. This assumption will however need to be monitored closely in the coming years. Should job growth not rebound as quickly as anticipated an update to the GMS may be warranted.

Net in-commuting is the number of employees who commute into the UCPR less the number of employees who commute out of the Counties. Net in-commuting is influenced by PPS and Official Plan policies that encourage the development of “complete communities” where people live close to where they work. As shown earlier, the UCPR has negative net commuting—more people leave the Counties for work than those that come in, especially

in the municipalities to the west. The GMS forecasts assume that the number of net out-commuters will remain near current levels throughout most of the forecast period, tempering slowly over the long-term.

On a County-wide basis, employment is forecast to grow to 35,990 by 2046 (see Table 10). This represents growth of 6,530 over the 25 year planning period from 2021 at an average annual growth rate of 0.8%. The forecast is very similar (for 2036) to that produced for the 2012 GMS, notwithstanding the lower than anticipated employment base for 2021.

Table 10: Employment in the UCPR, 2001 - 2046

Census Year	Total Employment	Employment Growth	Annual Growth Rate
2001	28,000		
2006	28,110	110	0.1%
2011	29,480	1,370	1.0%
2016	28,520	(960)	-0.7%
2021	29,460	940	0.7%
2026	30,540	1,080	0.7%
2031	31,810	1,270	0.8%
2036	33,180	1,370	0.8%
2041	34,590	1,410	0.8%
2046	35,990	1,400	0.8%
2001-2021		1,460	0.3%
2021-2046		6,530	0.8%

Source: Hemson based on Statistics Canada data

Similar to the population and household forecast, growth will be more rapid over the first 10 years of the planning period. The growth rate will remain fairly constant over the longer-term. The activity rate for the UCPR will fall slightly from 32% in 2016 to 30% in 2046.

D. Allocation of Employment to Lower-Tiers

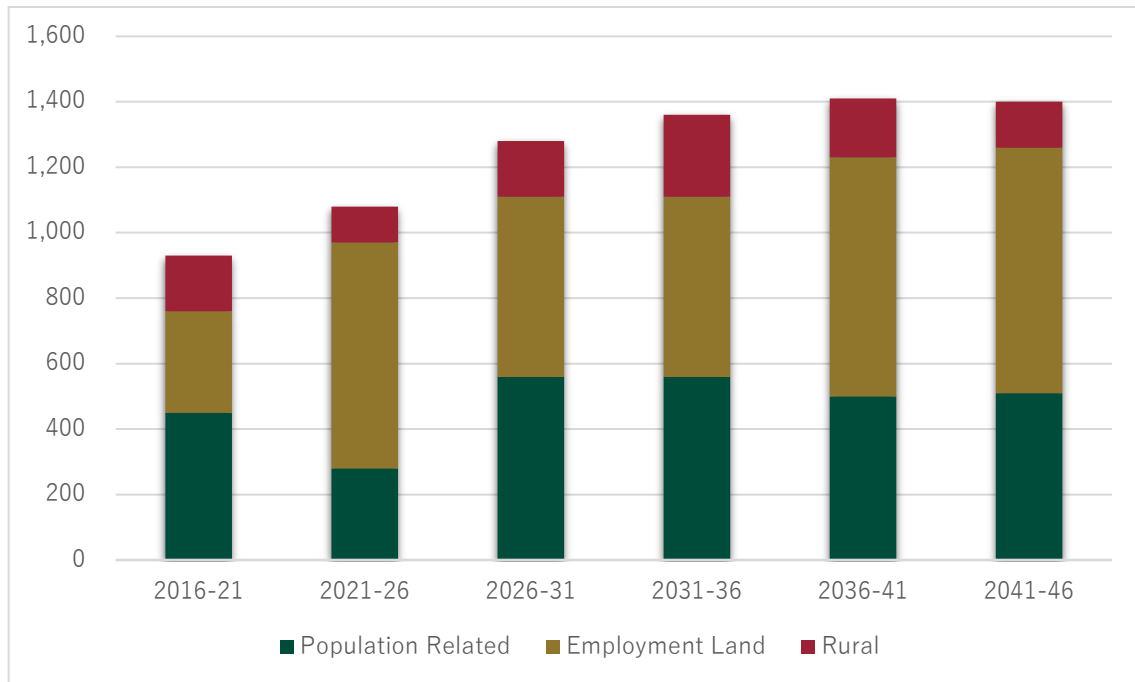
The distribution of future employment is based on where growth is directed through planning policies and the ability of each lower-tier municipality to accommodate different types of employment. The total employment forecast is translated into a forecast of employment by land use type and is then distributed to each lower-tier municipality by shares of each type of employment. As with the 2012 GMS, three employment land-use types used:

- Population Related Employment (PRE): employment that primarily serves a resident population. This category includes retail, education, health care, local government and urban work-at-home employment. The share of population-related employment in each municipality is largely tied to population growth.
- Employment Land Employment (ELE): refers to employment accommodated primarily in low-rise industrial buildings, the vast majority of which are located in the trade and industry policy areas designated in the UCPR Official Plan. The distribution of employment land employment is accordingly based on the ability of each lower-tier municipality to accommodate growth in this type of employment on vacant trade and industry policy area locations.
- Rural Employment: refers to jobs in rural areas, including primary industries and agriculture plus some uses typically found in urban employment areas, but not located on urban land designated for industrial or commercial use. These are typically small scale manufacturing or construction businesses as well as tourism and recreation activities which play an important role in the UCPR.

Of the total UCPR employment forecast between 2021 and 2046 nearly half will be on employment land. This reflects in part the suitability and availability of serviced trade and industry lands, notwithstanding the recent decline in employment land employment in the Counties.

Figure 17 displays the employment growth by type to 2046. Population-related employment will be steady and in line with population growth throughout the forecast period. Growth in rural employment will also remain steady but will not comprise a significant component of overall employment growth.

Figure 17: Employment Growth by Type in the UCPR, 2016 - 2046



Source: Hemson Consulting

The distribution of employment is based on the ability of each lower-tier municipality to accommodate growth in each land-use type. As noted, population-related employment is generally assumed to follow population growth, though the ability of larger urban communities to attract regional-serving retail activities is recognized. Growth in rural employment generally follows historical trends, and will be mostly focussed in and around rural settlements.

Growth in employment land employment in the Counties is generally tied to the suitability and availability of vacant trade and industry policy areas. The suitability of lands considers easy access to major highways, the proximity

of a labour pool, the opportunity to cluster near existing employment hubs, the availability of full municipal services, and the absence of any topographical constraints that would prevent the assembly of large land parcels.

The historical and forecast employment allocations are set out in Tables 11 and 12. Russell is poised to accommodate the most employment growth due to its large population growth and its designated trade and industry policy areas along Highway 417 that rank highly on employment land suitability criteria. The municipalities of Limoges, Clarence-Rockland, The Nation, Champlain, and Alfred and Plantagenet are also forecast to experience higher-than-historical employment growth, particularly in employment land employment. Employment growth in Casselman and Hawkesbury, which have no rural areas, will mostly take the form of population-related employment. Conversely, nearly all employment growth in East Hawkesbury will be on rural lands.

Table 11: Historical Employment Growth by Municipality, 2001 – 2021

Census Year	2001	2006	2011	2016	2021*	2001-2021 Compound Annual Growth Rate
Alfred and Plantagenet	2,030	2,480	2,610	2,130	2,190	0.4%
Casselman	1,810	1,930	2,500	1,900	1,930	0.3%
Champlain	3,770	3,590	3,310	3,270	3,310	-0.6%
Clarence-Rockland	4,840	4,970	6,440	6,010	6,200	1.2%
East Hawkesbury	670	990	690	830	880	1.4%
Hawkesbury	6,930	7,770	6,960	6,710	6,780	-0.1%
Russell	3,550	3,850	4,130	4,630	5,020	1.7%
The Nation/La Nation	2,390	2,520	2,830	3,050	3,140	1.4%
UCPR	25,990	28,100	29,470	28,530	29,450	0.6%

Source: Statistics Canada, Census 2001-2016; Hemson projection for 2021.

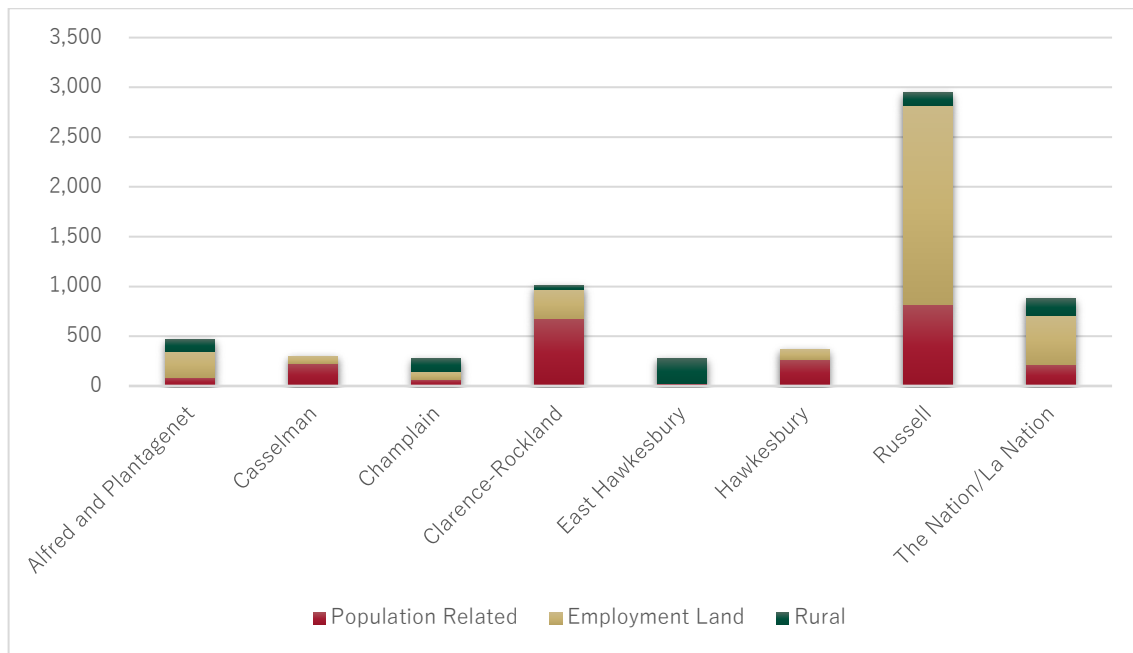
Table 12: Forecast Employment Growth by Municipality, 2021 – 2046

Census Year	2021	2026	2031	2036	2041	2046	2021-2046 Compound Annual Growth Rate
Alfred and Plantagenet	2,190	2,270	2,360	2,460	2,570	2,670	0.8%
Casselman	1,930	1,970	2,040	2,100	2,160	2,220	0.6%
Champlain	3,310	3,350	3,400	3,470	3,530	3,590	0.3%
Clarence-Rockland	6,200	6,360	6,590	6,800	7,010	7,220	0.6%
East Hawkesbury	880	920	980	1,060	1,120	1,170	1.1%
Hawkesbury	6,780	6,830	6,900	6,980	7,060	7,140	0.2%
Russell	5,020	5,550	6,110	6,680	7,320	7,960	1.9%
The Nation/La Nation	3,140	3,290	3,440	3,630	3,820	4,020	1.0%
UCPR	29,450	30,540	31,820	33,180	34,590	35,990	0.8%

Source: Hemson Consulting

Figure 18 displays the absolute change in the number of jobs expected in each municipality by land-use type to 2046.

Figure 18: Employment Growth by Type by Municipality, 2021 - 2046



Source: Hemson Consulting

The next section of the report sets out the results of the land supply and capacity analysis.

4. Land Needs Assessment

This section includes the results of the assessment of the amount of land required to accommodate the GMS growth forecasts set out in Section 3. The approach and main conclusions are summarized below. Detailed results are provided in two appendices:

- Appendix A – which provides detailed information on the growth forecasts; and
- Appendix B – which summarizes the residential and employment land needs for each municipality.

A. Land Needs Assessment (LNA) Methodology

The PPS requires that the UCPR make available sufficient land to accommodate an appropriate range and mix of land uses to meet projected needs for a time horizon of up to 25 years. In doing so, the UCPR must also:

- accommodate a significant supply and range of housing options through intensification and redevelopment where this can be accommodated taking into account existing building stock or areas; and
- plan for, protect and preserve employment areas for current and future uses.

The following terms, drawn mainly from PPS definitions, are used in the analysis and tables that follow:

- **Built-up Area (BUA):** area in within a settlement area where development is concentrated and which has a mix of land uses. The BUA is where residential intensification will occur.

- **Intensification:** residential development within a municipalities BUA, typically in the form of higher density units.
- **Designated Growth Area (DGA):** means lands within settlement areas designated in the official plan for growth over the long-term planning horizon, but which have not yet been fully developed. Designated growth areas include lands which are designated and available for residential growth as well as lands required for employment and other uses. In the UCPR, vacant DGA will accommodate the majority of housing growth to 2046.
- **Settlement Areas:** means urban areas and rural settlement areas within municipalities (such as cities, towns, villages and hamlets) that are either built-up area or designated growth area. They are interchangeable with Urban Policy Areas in the UCPR. Most housing growth and population-related employment will be located in settlement areas.
- **Rural Settlements:** existing hamlets or similar existing small settlement areas that are long-established and identified in official plans.
- **Rural Lands:** means lands which are located outside settlement areas and which are outside prime agricultural areas.
- **Employment Area (EA):** means those areas designated in the official plan for clusters of business and economic activities including, but not limited to, manufacturing, warehousing, offices, and associated retail and ancillary facilities. These areas are designated as trade and industry areas in the UCPR Official Plan and will accommodate most of the employment land employment growth to 2046.

- **Density:** the number of people, jobs or housing units per a given land area; in the GMS all density figures are assumed to be per hectare unless otherwise stated.
- **Land Supply:** lands designated within settlement areas that are designated for residential or employment development.
- **Land Need:** Hectares of land required to accommodate the GMS growth forecasts.

Land needs are determined for two types of geography:

- **Community Area**, focused around housing and the local employment, infrastructure, and services necessary to sustain residential areas; and
- **Employment Area**, focused around land for the exclusive use of employment activity. In UCPR, such lands are generally designated as trade and industry policy areas.

Figures 19 and 20 display the steps for determining the community area and employment area land need respectively.

Figure 19: Community Area Land Need Methodology

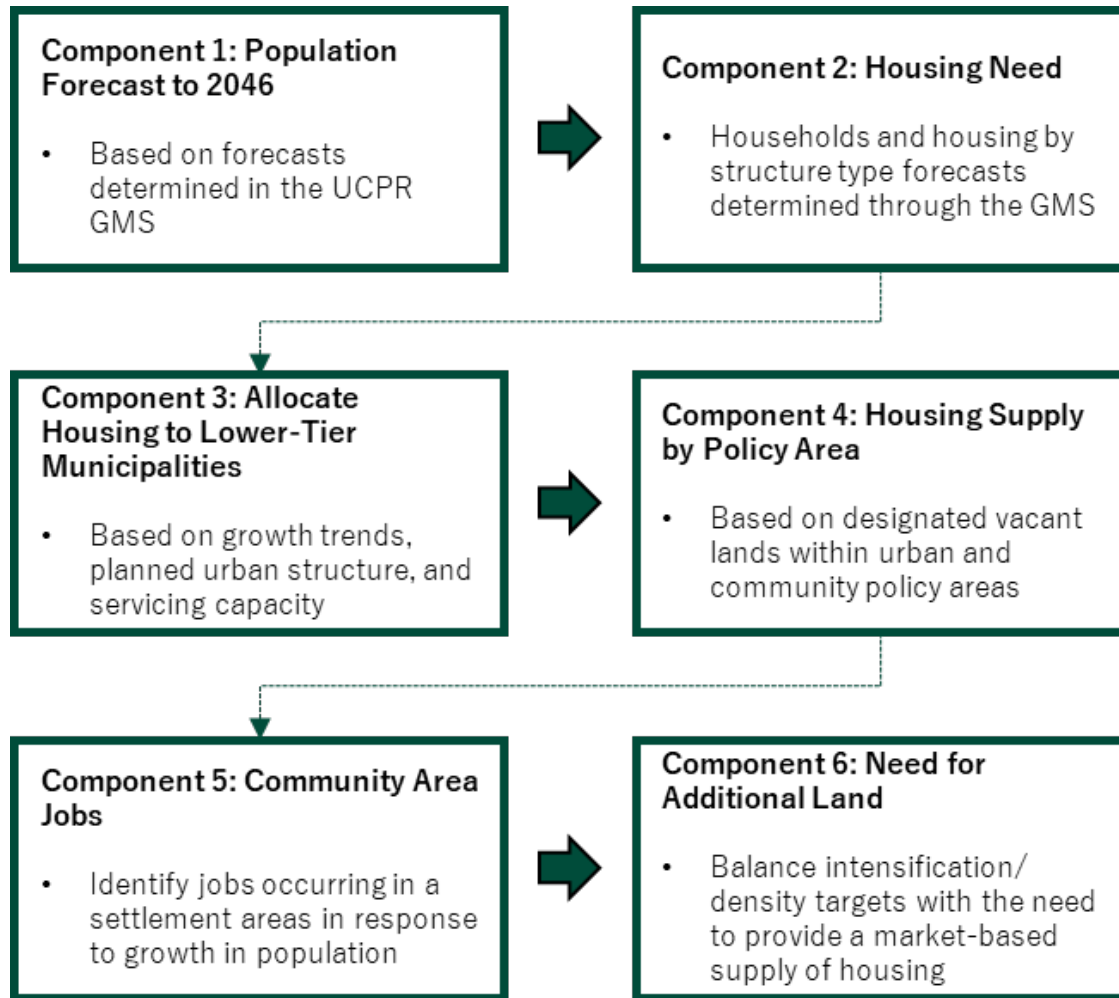
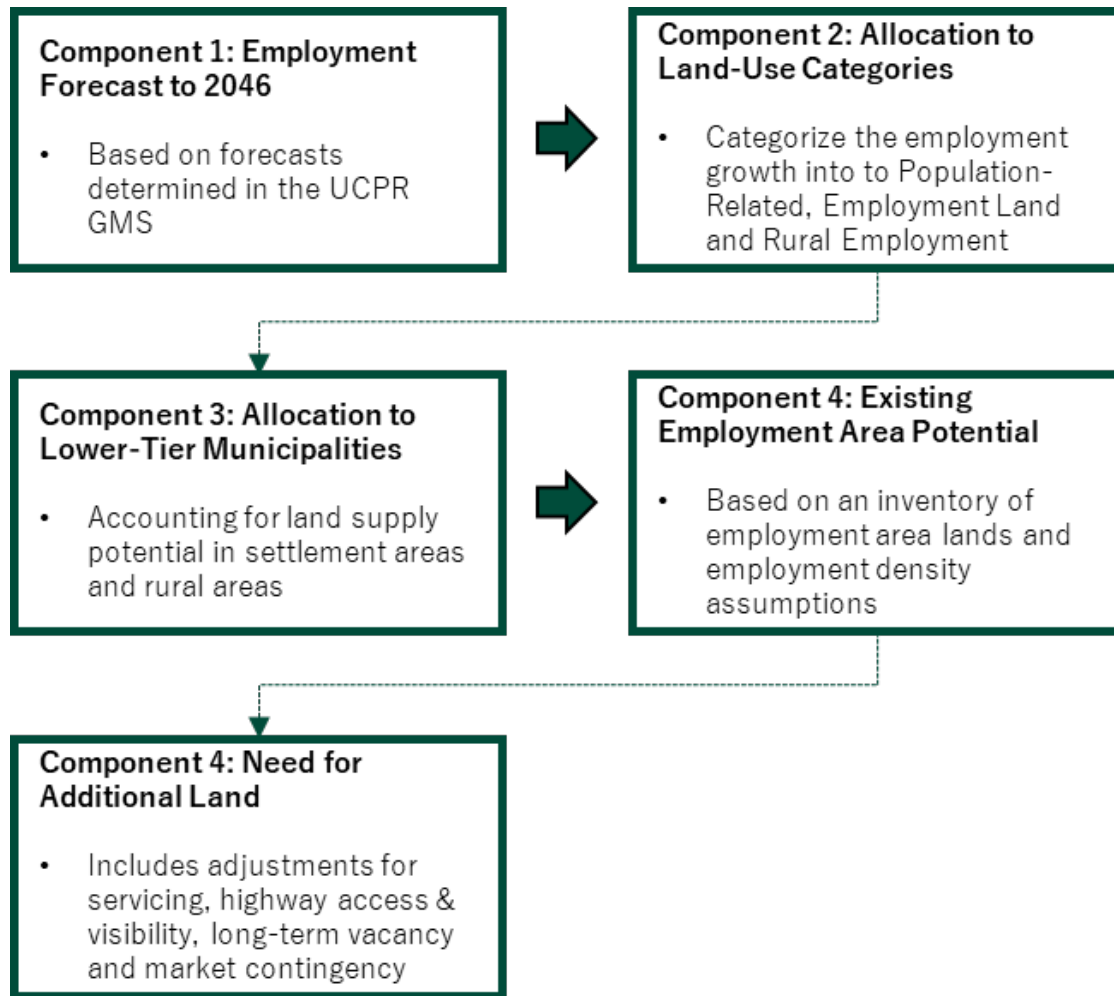


Figure 20: Employment Area Land Need Methodology



Ultimately the purpose of the land needs assessment is to determine whether the UCPR has sufficient lands to accommodate the GMS growth forecasts to 2046. Should the analysis reveal a deficiency in land, the UCPR will need to consider whether there are opportunities for accommodating a higher amount of development as intensification or higher densities, or whether any lands may be appropriate for conversion to other uses to satisfy land requirements. Where appropriate a settlement area boundary expansion may be warranted.

B. Vacant Land Supply

The UCPR is made up of 8 lower-tier municipalities that collectively contain 30 settlement areas. One of the key steps in the land needs assessment is to determine the current available supply of vacant land in the Counties.

This work has involved a detailed vetting process, including:

- assessment of the current status of all parcels to confirm whether the land is actually vacant;
- removal of land that is unsuitable for development due to rights of way, newly developed parcels, natural heritage, parks, parcels used for public infrastructure, and other encumbrances. This process was undertaken utilizing Google Earth's Pro version that provides the latest satellite imagery for the UCPR; and
- detailed consultation and review with local planning staff.

Tables 13 and 14 summarize the vacant land supply for residential (community area) and for trade and industry (employment area) lands in the UCPR. Residential lands include lands in both urban and rural settlement areas.

The vacant designated lands shown in Table 13 and 14 only represent lands that can be developed ("gross" hectares); all environmentally sensitive lands (in natural heritage systems) have been excluded.

The tables also show "net" vacant land areas, which exclude public lands for stormwater management facilities, local roads, and, in community areas, local schools and population-related employment. "Net to gross" assumptions range between 65% and 70% for community area (residential) lands and are 80% to 85% for all employment area parcels larger than 0.5 hectares.

About 30% of all vacant residential land is in Clarence-Rockland, while less than 5% is in Russell.

Table 13: Residential Vacant Land by Lower-Tier Municipality

Municipality	Gross Developable ha	Net to Gross Assumption	Net ha
Alfred and Plantagenet	297.8	65%	193.5
Casselman	52.6	70%	36.8
Champlain	170.3	65%	110.7
Clarence-Rockland	384.8	65%	250.1
East Hawkesbury	0.0	70%	0.0
Hawkesbury	95.3	70%	66.7
Russell	55.9	70%	39.1
The Nation/La Nation	228.4	70%	159.9
UCPR	1,285.1	67%	856.9

Source: Hemson based on UCPR data

The UCPR has 570.6 gross developable vacant hectares of designated trade and industry lands and industrial coded parcels, the vast majority of which are in Champlain (376.5 hectares), The Nation (85.5 hectares) and Russell (35.3 hectares). These lands will be the focus for future employment land employment.

In cases where there are existing designated trade and industry lands on which development of urban employment uses is either unsuitable or not feasible these lands have been excluded from the vacant supply. This includes two large trade and industry land areas south of Limoges and west of Embrun in Russell Township.

Table 14: Vacant Employment Land by Lower-Tier Municipality

	Gross Developable ha¹	Net to Gross Assumption	Net ha
Alfred and Plantagenet	24.7	80%	19.8
Casselman	0.4	100%	0.4
Champlain	376.5	80%	300.7
Clarence-Rockland	20.4	80%	16.3
East Hawkesbury	0.0	n/a	0.0
Hawkesbury	27.8	78%	21.6
Russell	35.3	80%	28.3
The Nation/La Nation	85.5	80%	68.5
UCPR	570.6	80%	455.5

Source: Hemson based on UCPR data; 1: Vacant area includes parcels within the Trade and Industry Policy area as well as other industrial coded parcels.

C. Land Needs Assessment Results: Community Area

This section presents the community area land needs assessment results. The first step in the analysis is to translate the population forecasts into a forecasts of households and housing units by structure type. Table 15 summarizes the distribution of total housing in the Counties between 2021 and 2046.

Table 15: Total Housing Allocations, 2021 - 2046

Municipality	2021	2046	Growth
Alfred and Plantagenet	4,080	4,780	700
Casselman	1,580	2,450	870
Champlain	3,750	4,330	580
Clarence-Rockland	10,100	13,930	3,830
East Hawkesbury	1,430	1,650	220
Hawkesbury	5,080	5,650	570
Russell	7,230	11,550	4,320
The Nation/La Nation	5,100	6,360	1,260
UCPR	38,350	50,700	12,350

Source: Hemson Consulting

In keeping with PPS policies, most housing growth will be directed to settlement areas, either as intensification within built-up areas or as growth on vacant land in designated growth areas (DGA). A comparatively small share of housing is allocated to rural areas.

As part of the land needs assessment, a survey of the density of recently constructed housing was undertaken across the UCPR settlement areas to assess current DGA and rural area densities. The survey found that:

- in Russell, recent developments of single detached units yielded densities of about 15 units per hectare (uph). Semi-detached units in Russell had densities of about 21 uph;
- in Clarence-Rockland, recent developments of row houses have been constructed at about 32 uph;
- row houses have been constructed recently in Hawkesbury at about 25 uph; and

- development in rural settlement areas was generally less dense, with recently constructed single detached units producing a density of about 6 uph.

The survey results inform assumptions about the future development of vacant DGA community area lands (see Table 16).

Table 16 – Urban DGA Land Need by Municipality

Municipality	New Urban DGA	Single/Semi	Row	Apartment	Total
Alfred and Plantagenet	Unit Allocation	363	68	48	479
	Density	15	30	60	18
	Land Need (net ha)	24.2	2.3	0.8	27.3
Casselman	Unit Allocation	493	51	196	740
	Density	15	30	60	20
	Land Need (net ha)	32.9	1.7	3.3	37.8
Champlain	Unit Allocation	366	65	33	464
	Density	15	30	60	17
	Land Need (net ha)	24.4	2.2	0.5	27.1
Clarence-Rockland	Unit Allocation	1,444	488	701	2,633
	Density	18	32	60	25
	Land Need (net ha)	80.2	15.3	11.7	107.2
East Hawkesbury	Unit Allocation	0	0	0	0
	Density	15	30	60	n/a
	Land Need (net ha)	0.0	0.0	0.0	0.0
Hawkesbury	Unit Allocation	303	104	78	485
	Density	18	32	60	23
	Land Need (net ha)	16.8	3.2	1.3	21.4
Russell	Unit Allocation	2,374	665	470	3,509
	Density	15	30	60	19
	Land Need (net ha)	158.3	22.2	7.8	188.3
The Nation/La Nation	Unit Allocation	525	94	162	781
	Density	15	30	60	19
	Land Need (net ha)	35.0	3.1	2.7	40.8
UCPR	Unit Allocation	5,868	1,535	1,688	9,090
	Density	16	31	60	20
	Land Need (net ha)	371.8	49.9	28.1	449.9

Source: Hemson Consulting

As seen in Table 17, 13.7% of housing units are forecast to be constructed in built-up areas as intensification where no additional land is required to accommodate them.

Table 17: Housing Growth Through Intensification, 2021 - 2046

Municipality	Unit Allocations in the Built-up Area	Total Unit Allocations to Municipality	Intensification Rate
Alfred and Plantagenet	91	700	13.0%
Casselman	131	870	15.0%
Champlain	87	580	15.0%
Clarence-Rockland	512	3,830	13.4%
East Hawkesbury	0	220	0.0%
Hawkesbury	86	570	15.0%
Russell	638	4,320	14.8%
The Nation/La Nation	149	1,260	11.8%
UCPR	1,693	12,350	13.7%

Source: Hemson Consulting

As well, only a small amount of housing growth (13%) will take place in rural settlements and scattered rural lots in rural areas (see Table 18). Like the units in the built-up area, it is assumed that rural units will not require any additional land as there is sufficient land already available in the rural areas.

Table 18: Housing Growth in Rural Areas, 2021 - 2046

Municipality	Rural Settlements	Other Rural Areas	Total	Share of Municipal Allocation
Alfred and Plantagenet	95	35	130	19%
Casselman	0	0	0	0%
Champlain	0	29	29	5%
Clarence-Rockland	417	268	685	18%
East Hawkesbury	143	77	220	100%
Hawkesbury	0	0	0	0%
Russell	65	108	173	4%
The Nation/La Nation	267	63	330	26%
UCPR	986	580	1,567	13%

Source: Hemson Consulting

Growth in designated growth areas (DGA) is required to accommodate an additional 9,090 units or 74% of the total unit growth (see Table 19).

Table 19: Designated Growth Area, Housing Growth, 2021 - 2046

Municipality	Unit Allocation to the Designated Growth Areas	Share of Municipal Allocation
Alfred and Plantagenet	479	68%
Casselman	740	85%
Champlain	464	80%
Clarence-Rockland	2,633	69%
East Hawkesbury	0	0%
Hawkesbury	485	85%
Russell	3,509	81%
The Nation/La Nation	781	62%
UCPR	9,090	74%

Source: Hemson Consulting

Table 20 compares the unit allocation to the DGA with the DGA supply.

- UCPR needs DGA lands to accommodate 9,090 housing units to 2046.
- There are 4,101 housing units in the DGA associated with approved plans of subdivision.
- Based on the densities set out in Table 16, there is potential for 17,462 housing units to be constructed on existing vacant DGA land. Therefore, on a UCPR-wide basis no additional DGA land is required to 2046.
- However, at the local level there is a deficiency of vacant DGA supply in Russell, equivalent to 1,962 units (see Table 20).

Table 20: Housing Growth in Designated Growth Areas, 2021 – 2046

Municipality	Unit Allocation to the Designated Growth Areas	Less Units Within Plans of Subdivision	Less Units on Designated Vacant Lands	Additional Units to be Allocated
Alfred and Plantagenet	479	132	3,401	(3,054)
Casselman	740	585	720	(566)
Champlain	464	445	1,893	(1,874)
Clarence-Rockland	2,633	1,314	6,146	(4,827)
East Hawkesbury	0	0	0	0
Hawkesbury	485	0	1,513	(1,028)
Russell	3,509	818	729	1,962
The Nation/La Nation	781	807	3,059	(3,085)
UCPR	9,090	4,101	17,462	(12,472)

Source: Hemson Consulting

Having determined there is a housing shortfall in the DGA in Russell, this shortfall can now be translated into a land need (see Table 21). The shortfall of 1,962 units is first restated in terms of population, applying a person per unit factor, which also accommodates factors for non-household population, and Census net under-coverage to ensure population is always being measured the same way (a total of 5,955 people). Once the total population associated with the unit shortfall is established, a factor for population-related employment in the community area is added at one job for every 10 residents.

At an assumed DGA density of 40 persons and jobs per hectare, the additional community area land need for Russell is calculated to be 163.8 hectares (see Table 21).

The assumed density for development on additional DGA is somewhat higher than what is observed for recent development (see Table 16). This is in keeping with PPS and Official Plan policies that seek to promote a more compact urban form and transit-supportive settlement areas.

Table 21: Additional DGA Land Requirement for Russell Township

Steps	Russell Township
Additional Unit Allocations in the DGA	1,962
Estimated New Unit Persons Per Unit (per DC Model and Stats Canada Special Run)	2.90
Household Population in New Units	5,689
Total Population (including Census Net Undercoverage and Non-Household Population)	5,955
Population Related Employment Within Community Area DGA	596
Total Person and Jobs within DGA	6,551
Estimated Density (Persons and Jobs within Community Area)	40
Gross Land Need (ha) / Excess Land Designated	163.8

Source: Hemson Consulting

Based on the community area land needs assessment the total additional developable (“gross”) community area land need for Russell to 2046 is 163.8 hectares.

D. Land Needs Assessment Results: Employment Area

This section presents the employment area land needs assessment results. Employment area is generally required to accommodate employment land employment growth. Table 22 summarizes the distribution of employment land employment growth in the Counties between 2021 and 2046.

Table 22: Employment Land Employment Growth in UCPR 2021 – 2046

Municipality	2021	2046	Growth
Alfred and Plantagenet	920	1,180	260
Casselman	750	820	70
Champlain	1,630	1,710	80
Clarence-Rockland	1,270	1,560	290
East Hawkesbury	30	30	0
Hawkesbury	2,470	2,570	100
Russell	1,490	3,490	2,000
The Nation/La Nation	730	1,220	490
UCPR	9,290	12,580	3,290

Source: Hemson Consulting

As seen above, the Counties are required to have sufficient land to accommodate 3,290 jobs on employment land to 2046. A very small portion of these jobs can be accommodated as intensification on existing sites. The land needs assessment assumes that 206 jobs (6%) of the total employment land job growth will take the form of intensification. As well, it is assumed that a small portion of employment land employment growth (273 jobs or 8%) will occur in designated employment lands in rural areas (see Table 23).

Table 23: Employment Land Employment by Policy Area, 2021 – 2046

Municipality	Intensification	DGA	Rural Oriented	Total
Alfred and Plantagenet	23	178	59	260
Casselman	31	39	0	70
Champlain	41	30	9	80
Clarence-Rockland	32	181	77	290
East Hawkesbury	0	0	0	0
Hawkesbury	62	38	0	100
Russell	0	2,000	0	2,000
The Nation/La Nation	18	344	127	490
UCPR	206	2,811	273	3,290
Share of Growth	6.3%	85.4%	8.3%	100.0%

Source: Hemson Consulting

As seen above, about 85% of new employment land employment growth, or 2,811 jobs, is forecast to develop on designated employment lands (in designated growth areas). The associated land need is based on the area of these lands.

The land needs assessment assumes employment land densities of 12-15 jobs per net hectare on unserviced lands and 20 jobs per net hectare on fully serviced lands across the County, whether designated as trade and industry area or otherwise. These densities are based on observed densities on recent development in the Counties as well as the consulting team’s experience with employment densities in similar and surrounding jurisdictions. The net land area required to accommodate the 2,811 employment land jobs is shown in Table 24.

Given the importance of lands in Russell in accommodating future employment land employment, especially in the 417 Industrial Park, an analysis of the timing and density of development in the park in the near-term was undertaken in consultation with local planning staff. The following assumptions are made for lands in the 417 Industrial Park:

- development of the remaining unserviced vacant lands in the park will take place at a density of 12 jobs per net hectare, in keeping with recent trends; and
- development of any future lands is assumed to take place at a higher density of 20 jobs per net hectare, assuming that such lands are fully serviced.

Based on the above density assumptions and the employment land employment forecasts in Table 23, the ability of each municipality to accommodate their employment land employment allocation is calculated. On a UCPR-wide basis 156.5 hectares of land is required to accommodate the forecast job growth on employment lands. With a net vacant supply of 455.8 hectares, the UCPR as a whole has a land surplus of 299.2 net hectares of employment area (see Table 24).

Table 24: Sufficiency of Vacant Employment Areas to Accommodate Demand, 2021 – 2046

Municipality	Job Growth on Employment Lands, 2021 - 2046	Net Density Assumed	Land Required to Accommodate Job Growth (net ha)	Net Vacant Land Supply	Sufficiency of Employment Lands (net ha)
Alfred and Plantagenet	178	12	14.8	19.8	4.9
Casselman	39	12	3.3	0.7	(2.6)
Champlain	30	12	2.5	300.7	298.2
Clarence-Rockland	181	15	12.1	16.3	4.2
East Hawkesbury	0	12	0.0	0.0	0.0
Hawkesbury	38	15	2.6	21.6	19.0
Russell	2,000	20	98.3	28.3	(70.2)
The Nation/La Nation	344	15	23.0	68.5	45.5
UCPR	2,811	18	156.5	455.8	299.2

Source: Hemson Consulting

However, as with the residential land needs assessment, Russell, and to a minor extent Casselman, currently do not have enough land to accommodate their allocation.

In Russell's case, an additional 70.2 net hectares of designated employment area is required. This translates into a total ("gross" or developable) land need of 104.9 hectares based on:

- 77.7 net hectares of the Industrial Park being occupied at the time of the 2016 Census;
- 19.7 net hectares having been absorbed in the park between 2016 and 2021 (the base year of the forecasts);
- 45.9 net hectares being committed for development in the short-term, which will accommodate 597 of the forecast jobs to 2046; and
- 70.2 net hectares required beyond current commitments for development in the long-term, which will accommodate the remaining 1,403 forecast jobs to 2046 (see Table 25).

Accounting for long-term vacancy, the 70.2 hectares in Russell is increased to an 89.2 net hectare land need. This adjusted "net" land need is translated into a "gross" land need using an 85% net to gross factor which accounts for land for local roads and utilities (see Table 25).

The total additional developable ("gross") employment area land need for Russell to 2046 is 104.9 hectares.

Table 25: Additional Land Need in Russell Township's 417 Industrial Business Park

Total occupied area as of 2016	77.7 net ha
Absorbed Supply and jobs created, 2016-21	19.7 net ha 13 jobs per net ha (unserviced lands) 256 new jobs created between 2016 and 2021
Committed short-term supply and jobs created, 2021-2031	45.9 net ha 13 jobs per net ha (unserviced lands) 597 new jobs created on committed post-2021 lands
Employment Land Employment Forecast Allocation, 2021 to 2046	2,000 Growth of ELE jobs between 2021 and 2046 597 less committed post 2021 jobs 1,403 remaining allocation for new lands
Land needed to accommodate growth to 2046	1,403 number of jobs to be allocated on new lands 20 jobs per net ha (urban serviced lands) 70.2 net ha required beyond currently committed
	213.5 net ha occupied lands in 2046 10% Long-term vacancy 237.2 net ha occupied and long-term vacant 2046
	(143.3) less net ha occupied and committed 2021 (4.7) less net ha remaining vacant supply 89.2 net ha new employment land required to 2046 85% net to gross 104.9 gross ha required

Source: Hemson Consulting

5. Conclusions

The GMS updates the Counties population, housing, and employment forecasts over a planning horizon to 2046. The forecasts find that:

- The UCPR, which is in the midst of a growth surge, is set to grow rapidly over the next decade. Although slowing between 2031 and 2046 as the population ages, growth will remain steady until it reaches a permanent resident population of 125,000 and nearly 36,000 jobs in 2046. The major driver of growth will be in-migration from the City of Ottawa and its environs by young families seeking affordable singled detached homes.
- The rate of housing growth in the UCPR will outpace the rate of population growth over the next 25 years. The current market preference for single detached homes will shift somewhat towards medium and higher density housing forms as the effect of market demand and PPS policies that encourage intensification, transit-supportive communities, and a more compact urban form take hold.
- The UCPR remains an attractive location for development in employment areas (including trade and industry designations), particularly those that are located within easy access of Highway 417, are fully serviced, are close of existing labour pools and existing business clusters, and allow for a range and mix of business activities (in particular, the assembly of large land parcels). The development of the 417 Industrial Park in the Township of Russell is critical in this respect.
- Employment growth in the UCPR will be steady over the period to 2046. Most employment growth will be associated with the development of employment areas. However, a significant portion of employment growth will occur in direct response to population growth and in rural settlements and rural areas.

An assessment of the land required to accommodate the growth forecasts was undertaken. The assessment concludes that:

- The overall community area (or residential) land supply of 1,285 developable hectares is sufficient to accommodate the projected growth at the County level. However, based on the housing growth allocations, Russell does not have enough designated growth area lands to accommodate its long-term growth. In Russell's case, an additional 163.8 hectares of designated community area has been identified. Two broad options for dealing with this include:
 - increasing the required density for development in designated growth areas in order to reduce or eliminate the land need. In this respect, it is noted that the densities assumed in the land needs assessment in this report are already higher than densities on recent developed lands; and/or
 - expanding settlement area boundaries in Russell. This process requires more detailed analysis of the feasibility and most appropriate location for expansion and must be undertaken in accordance with PPS policies 1.1.3.8 and/or 1.1.3.9.
- The employment area (trade and industry) land supply of 570.6 developable hectares is sufficient to accommodate the projected employment growth at the County level. However, as with the residential land needs assessment, Russell, and to a minor extent Casselman, currently do not have enough land to accommodate their allocation. In Russell's case, an additional 104.9 hectares of designated employment area is required, almost certainly as an expansion to the 417 Industrial Park. In the case of Casselman, an additional 3.8 hectares is theoretically required.

Appendix A

Detailed Forecast Results

DETAILED FORECAST RESULTS: TOTAL POPULATION

Total Population	Historical					Forecast				
	2001	2006	2011	2016	2021	2026	2031	2036	2041	2046
Alfred and Plantagenet	8,940	8,980	9,460	9,920	10,200	10,430	10,650	10,900	11,130	11,410
Casselman	3,030	3,420	3,730	3,650	4,070	4,390	4,780	5,150	5,490	5,830
Champlain	8,930	9,010	8,820	8,910	8,870	9,170	9,320	9,510	9,700	9,940
Clarence-Rockland	20,390	21,570	23,850	25,240	27,300	29,010	30,780	32,260	33,620	34,960
East Hawkesbury	3,550	3,500	3,430	3,370	3,500	3,580	3,650	3,730	3,800	3,880
Hawkesbury	10,730	11,280	10,850	10,460	10,380	10,960	11,100	11,260	11,430	11,630
Russell	12,910	14,410	15,680	17,010	20,180	22,910	25,080	27,130	28,980	30,770
The Nation	11,020	11,040	12,000	13,210	13,760	14,440	14,880	15,510	16,070	16,690
UCPR	79,500	83,210	87,820	91,770	98,260	104,890	110,240	115,450	120,220	125,110

Total Population Change	Historical				Forecast				
	2001-06	2006-11	2011-16	2016-21	2021-26	2026-31	2031-36	2036-41	2041-46
Alfred and Plantagenet	40	480	460	280	230	220	250	230	280
Casselman	390	310	(80)	420	320	390	370	340	340
Champlain	80	(190)	90	(40)	300	150	190	190	240
Clarence-Rockland	1,180	2,280	1,390	2,060	1,710	1,770	1,480	1,360	1,340
East Hawkesbury	(50)	(70)	(60)	130	80	70	80	70	80
Hawkesbury	550	(430)	(390)	(80)	580	140	160	170	200
Russell	1,500	1,270	1,330	3,170	2,730	2,170	2,050	1,850	1,790
The Nation	20	960	1,210	550	680	440	630	560	620
UCPR	3,710	4,610	3,950	6,490	6,630	5,350	5,210	4,770	4,890

Annual Growth Rate	Historical				Forecast				
	2001-06	2006-11	2011-16	2016-21	2021-26	2026-31	2031-36	2036-41	2041-46
Alfred and Plantagenet	0.1%	1.0%	1.0%	0.6%	0.4%	0.4%	0.5%	0.4%	0.5%
Casselman	2.5%	1.8%	-0.4%	2.2%	1.5%	1.7%	1.5%	1.3%	1.2%
Champlain	0.2%	-0.4%	0.2%	-0.1%	0.7%	0.3%	0.4%	0.4%	0.5%
Clarence-Rockland	1.1%	2.0%	1.1%	1.6%	1.2%	1.2%	0.9%	0.8%	0.8%
East Hawkesbury	-0.3%	-0.4%	-0.4%	0.8%	0.5%	0.4%	0.4%	0.4%	0.4%
Hawkesbury	1.0%	-0.8%	-0.7%	-0.2%	1.1%	0.3%	0.3%	0.3%	0.3%
Russell	2.2%	1.7%	1.6%	3.5%	2.6%	1.8%	1.6%	1.3%	1.2%
The Nation	0.0%	1.7%	1.9%	0.8%	1.0%	0.6%	0.8%	0.7%	0.8%
UCPR	0.9%	1.1%	0.9%	1.4%	1.3%	1.0%	0.9%	0.8%	0.8%

DETAILED FORECAST RESULTS: HOUSEHOLDS

Total Households	Historical					Forecast				
	2001	2006	2011	2016	2021	2026	2031	2036	2041	2046
Alfred and Plantagenet	3,190	3,380	3,730	3,970	4,080	4,250	4,390	4,530	4,660	4,780
Casselman	1,110	1,240	1,430	1,440	1,580	1,790	1,980	2,150	2,310	2,450
Champlain	3,280	3,450	3,520	3,700	3,750	3,880	3,990	4,110	4,220	4,330
Clarence-Rockland	6,700	7,590	8,640	9,330	10,100	11,120	11,990	12,710	13,350	13,930
East Hawkesbury	1,290	1,320	1,310	1,370	1,430	1,480	1,530	1,570	1,610	1,650
Hawkesbury	4,440	4,730	4,950	4,960	5,080	5,220	5,340	5,460	5,560	5,650
Russell	4,040	4,730	5,280	5,870	7,230	8,280	9,210	10,080	10,850	11,550
The Nation	3,660	3,730	4,270	4,760	5,100	5,390	5,630	5,890	6,110	6,360
UCPR	27,710	30,170	33,130	35,400	38,350	41,410	44,060	46,500	48,670	50,700

Household Change	Historical				Forecast				
	2001-06	2006-11	2011-16	2016-21	2021-26	2026-31	2031-36	2036-41	2041-46
Alfred and Plantagenet	190	350	240	110	170	140	140	130	120
Casselman	130	190	10	140	210	190	170	160	140
Champlain	170	70	180	50	130	110	120	110	110
Clarence-Rockland	890	1,050	690	770	1,020	870	720	640	580
East Hawkesbury	30	(10)	60	60	50	50	40	40	40
Hawkesbury	290	220	10	120	140	120	120	100	90
Russell	690	550	590	1,360	1,050	930	870	770	700
The Nation	70	540	490	340	290	240	260	220	250
UCPR	2,460	2,960	2,270	2,950	3,060	2,650	2,440	2,170	2,030

Annual Growth Rate	Historical				Forecast				
	2001-06	2006-11	2011-16	2016-21	2021-26	2026-31	2031-36	2036-41	2041-46
Alfred and Plantagenet	1.2%	2.0%	1.3%	0.5%	0.8%	0.7%	0.6%	0.6%	0.5%
Casselman	2.2%	2.9%	0.1%	1.9%	2.5%	2.0%	1.7%	1.4%	1.2%
Champlain	1.0%	0.4%	1.0%	0.3%	0.7%	0.6%	0.6%	0.5%	0.5%
Clarence-Rockland	2.5%	2.6%	1.5%	1.6%	1.9%	1.5%	1.2%	1.0%	0.9%
East Hawkesbury	0.5%	-0.2%	0.9%	0.9%	0.7%	0.7%	0.5%	0.5%	0.5%
Hawkesbury	1.3%	0.9%	0.0%	0.5%	0.5%	0.5%	0.4%	0.4%	0.3%
Russell	3.2%	2.2%	2.1%	4.3%	2.7%	2.2%	1.8%	1.5%	1.3%
The Nation	0.4%	2.7%	2.2%	1.4%	1.1%	0.9%	0.9%	0.7%	0.8%
UCPR	1.7%	1.9%	1.3%	1.6%	1.5%	1.2%	1.1%	0.9%	0.8%

DETAILED FORECAST RESULTS: TOTAL EMPLOYMENT

Total Employment	Historical		Forecast				
	2016	2021	2026	2031	2036	2041	2046
Alfred and Plantagenet	2,130	2,190	2,270	2,360	2,460	2,570	2,670
Casselman	1,900	1,930	1,970	2,040	2,100	2,160	2,220
Champlain	3,270	3,310	3,350	3,400	3,470	3,530	3,590
Clarence-Rockland	6,010	6,200	6,360	6,590	6,800	7,010	7,220
East Hawkesbury	830	880	920	980	1,060	1,120	1,170
Hawkesbury	6,710	6,780	6,830	6,900	6,980	7,060	7,140
Russell	4,630	5,020	5,550	6,110	6,680	7,320	7,960
The Nation	3,050	3,140	3,290	3,440	3,630	3,820	4,020
UCPR	28,530	29,450	30,540	31,820	33,180	34,590	35,990

Employment Change	Forecast					
	2016-21	2021-26	2026-31	2031-36	2036-41	2041-46
Alfred and Plantagenet	60	80	90	100	110	100
Casselman	30	40	70	60	60	60
Champlain	40	40	50	70	60	60
Clarence-Rockland	190	160	230	210	210	210
East Hawkesbury	50	40	60	80	60	50
Hawkesbury	70	50	70	80	80	80
Russell	390	530	560	570	640	640
The Nation	90	150	150	190	190	200
UCPR	920	1,090	1,280	1,360	1,410	1,400

Annual Growth Rate	Forecast					
	2016-21	2021-26	2026-31	2031-36	2036-41	2041-46
Alfred and Plantagenet	0.6%	0.7%	0.8%	0.8%	0.9%	0.8%
Casselman	0.3%	0.4%	0.7%	0.6%	0.6%	0.5%
Champlain	0.2%	0.2%	0.3%	0.4%	0.3%	0.3%
Clarence-Rockland	0.6%	0.5%	0.7%	0.6%	0.6%	0.6%
East Hawkesbury	1.2%	0.9%	1.3%	1.6%	1.1%	0.9%
Hawkesbury	0.2%	0.1%	0.2%	0.2%	0.2%	0.2%
Russell	1.6%	2.0%	1.9%	1.8%	1.8%	1.7%
The Nation	0.6%	0.9%	0.9%	1.1%	1.0%	1.0%
UCPR	0.6%	0.7%	0.8%	0.8%	0.8%	0.8%

DETAILED FORECAST RESULTS: HOUSING BY STRUCTURE TYPE

Alfred and Plantagenet	Singles	Semis	Rows	Apartments	Total
2001	2,670	140	70	330	3,210
2006	2,820	190	40	330	3,380
2011	3,010	290	50	390	3,740
2016	3,100	400	80	400	3,980
2021	3,170	410	90	410	4,080
2026	3,270	440	110	430	4,250
2031	3,360	460	130	440	4,390
2036	3,440	480	160	450	4,530
2041	3,520	500	170	470	4,660
2046	3,600	510	190	480	4,780

Clarence-Rockland	Singles	Semis	Rows	Apartments	Total
2001	5,540	340	150	680	6,710
2006	6,120	270	240	960	7,590
2011	6,770	380	350	1,150	8,650
2016	7,090	370	450	1,420	9,330
2021	7,440	400	700	1,560	10,100
2026	7,950	470	860	1,840	11,120
2031	8,370	540	1,020	2,060	11,990
2036	8,690	600	1,170	2,260	12,720
2041	8,990	640	1,290	2,430	13,350
2046	9,250	690	1,410	2,580	13,930

Russell	Singles	Semis	Rows	Apartments	Total
2001	3,550	60	100	350	4,060
2006	4,060	70	110	500	4,740
2011	4,560	90	110	540	5,300
2016	4,860	250	110	670	5,890
2021	5,510	490	370	870	7,240
2026	6,100	610	550	1,020	8,280
2031	6,620	720	730	1,140	9,210
2036	7,110	820	900	1,250	10,080
2041	7,530	910	1,050	1,360	10,850
2046	7,930	980	1,190	1,450	11,550

Casselman	Singles	Semis	Rows	Apartments	Total
2001	770	30	50	270	1,120
2006	870	70	60	250	1,250
2011	920	110	90	320	1,440
2016	920	100	70	350	1,440
2021	950	130	90	400	1,570
2026	1,070	170	100	460	1,800
2031	1,160	190	110	510	1,970
2036	1,250	220	130	560	2,160
2041	1,330	240	140	600	2,310
2046	1,410	260	150	630	2,450

East Hawkesbury	Singles	Semis	Rows	Apartments	Total
2001	1,210	40	10	40	1,300
2006	1,250	20	10	50	1,330
2011	1,250	30	0	40	1,320
2016	1,330	10	0	40	1,380
2021	1,380	10	0	40	1,430
2026	1,430	10	0	40	1,480
2031	1,470	20	0	40	1,530
2036	1,510	20	0	40	1,570
2041	1,550	20	0	50	1,620
2046	1,580	20	0	50	1,650

The Nation	Singles	Semis	Rows	Apartments	Total
2001	3,330	80	10	240	3,660
2006	3,420	70	20	230	3,740
2011	3,880	110	20	270	4,280
2016	4,100	210	70	390	4,770
2021	4,290	240	100	480	5,110
2026	4,460	260	130	540	5,390
2031	4,600	280	150	590	5,620
2036	4,750	310	190	640	5,890
2041	4,880	330	220	690	6,120
2046	5,020	350	250	740	6,360

Champlain	Singles	Semis	Rows	Apartments	Total
2001	2,690	150	50	400	3,290
2006	2,730	290	50	390	3,460
2011	2,970	150	40	370	3,530
2016	3,090	160	30	430	3,710
2021	3,110	180	30	430	3,750
2026	3,200	190	50	440	3,880
2031	3,270	210	70	450	4,000
2036	3,350	220	80	460	4,110
2041	3,420	230	100	470	4,220
2046	3,500	240	110	470	4,320

Hawkesbury	Singles	Semis	Rows	Apartments	Total
2001	1,840	530	240	1,840	4,450
2006	1,850	430	230	2,230	4,740
2011	1,790	630	260	2,280	4,960
2016	1,790	670	260	2,240	4,960
2021	1,890	680	260	2,260	5,090
2026	1,960	690	280	2,280	5,210
2031	2,030	700	310	2,300	5,340
2036	2,090	710	340	2,320	5,460
2041	2,140	720	360	2,330	5,550
2046	2,190	730	380	2,350	5,650

DETAILED FORECAST RESULTS: EMPLOYMENT BY LAND USE TYPE

Alfred and Plantagenet	Population Relaed	Emp. Land	Rural	Total
2016	440	900	790	2,130
2021	460	920	820	2,200
2026	470	970	830	2,270
2031	490	1,010	860	2,360
2036	510	1,060	890	2,460
2041	530	1,120	920	2,570
2046	550	1,180	940	2,670

Clarence-Rockland	Population Relaed	Emp. Land	Rural	Total
2016	3,180	1,190	1,640	6,010
2021	3,290	1,270	1,650	6,210
2026	3,370	1,330	1,660	6,360
2031	3,540	1,380	1,660	6,580
2036	3,700	1,430	1,680	6,810
2041	3,830	1,490	1,690	7,010
2046	3,970	1,560	1,690	7,220

Russell	Population Relaed	Emp. Land	Rural	Total
2016	2,460	1,340	840	4,640
2021	2,660	1,490	860	5,010
2026	2,750	1,920	880	5,550
2031	2,950	2,250	910	6,110
2036	3,140	2,590	940	6,670
2041	3,310	3,030	970	7,310
2046	3,480	3,490	990	7,960

Casselman	Population Relaed	Emp. Land	Rural	Total
2016	1,150	740	0	1,890
2021	1,180	750	0	1,930
2026	1,210	760	0	1,970
2031	1,260	770	0	2,030
2036	1,310	790	0	2,100
2041	1,360	800	0	2,160
2046	1,410	820	0	2,230

East Hawkesbury	Population Relaed	Emp. Land	Rural	Total
2016	10	30	790	830
2021	20	30	840	890
2026	20	30	870	920
2031	30	30	920	980
2036	30	30	1,000	1,060
2041	40	30	1,050	1,120
2046	50	30	1,090	1,170

The Nation	Population Relaed	Emp. Land	Rural	Total
2016	600	710	1,730	3,040
2021	640	730	1,770	3,140
2026	660	830	1,790	3,280
2031	700	910	1,820	3,430
2036	760	1,000	1,870	3,630
2041	810	1,110	1,910	3,830
2046	860	1,220	1,940	4,020

Champlain	Population Relaed	Emp. Land	Rural	Total
2016	540	1,620	1,110	3,270
2021	550	1,630	1,130	3,310
2026	550	1,650	1,150	3,350
2031	570	1,660	1,180	3,410
2036	580	1,670	1,210	3,460
2041	600	1,690	1,240	3,530
2046	620	1,710	1,260	3,590

Hawkesbury	Population Relaed	Emp. Land	Rural	Total
2016	4,260	2,450	0	6,710
2021	4,310	2,470	0	6,780
2026	4,340	2,490	0	6,830
2031	4,400	2,510	0	6,910
2036	4,460	2,520	0	6,980
2041	4,520	2,550	0	7,070
2046	4,580	2,570	0	7,150

Appendix B

Municipal Land Needs Assessment

Community Area Land Needs Assessment										
	Steps	United Counties of Prescott and Russell	Alfred and Plantagenet	Casselman	Champlain	Clarence-Rockland	East Hawkesbury	Hawkesbury	Russell	The Nation/La Nation
Steps to Determine if Additional Land is Required	Unit Allocation to the Designated Growth Areas within Serviced Settlements	9,090	479	740	464	2,633	0	485	3,509	781
	Less Units Within Plans of Subdivision	3,760	132	585	445	445	445	445	818	445
	Less Units on Designated Vacant Lands	17,462	3,401	720	1,893	6,146	0	1,513	729	3,059
	Additional Units to be Allocated	(12,131)	(3,054)	(566)	(1,874)	(3,958)	(445)	(1,473)	1,962	(2,723)
Steps to Determine How Much Excess Land or Land Need Is Required	Additional Unit Allocations in the Designated Growth Areas	(12,131)	(3,054)	(566)	(1,874)	(3,958)	(445)	(1,473)	1,962	(2,723)
	Estimated New Unit Persons Per Unit (per DC Model and Stats Canada Special Run)	2.61	2.65	2.65	2.65	2.65	2.65	2.65	2.90	2.65
	Household Population in New Units	(31,658)	(8,093)	(1,499)	(4,967)	(10,488)	(1,179)	(3,904)	5,689	(7,217)
	Total Population (including Census Net Undercoverage and Non-Household Population)	(34,112)	(8,478)	(1,571)	(5,204)	(13,400)	0	(2,855)	5,955	(8,559)
	Population Related Employment Within Community Area DGA	(3,411)	(848)	(157)	(520)	(1,340)	0	(285)	596	(856)
	Total Person and Jobs within DGA	(37,523)	(9,326)	(1,728)	(5,724)	(14,740)	0	(3,140)	6,551	(9,415)
	Estimated Density (Persons and Jobs within Community Area)	40	40	40	40	40	40	40	40	42
	Gross Land Need (ha) / Excess Land Designated	(926.9)	(233.2)	(43.2)	(143.1)	(368.5)	0.0	(78.5)	163.8	(224.2)

Source: Hemson Consulting

Employment Area Land Needs Assessment									
Steps	United Counties of Prescott and Russell	Alfred and Plantagenet	Casselman	Champlain	Clarence-Rockland	East Hawkesbury	Hawkesbury	Russell	The Nation/La Nation
Employment Land Employment Growth, 2021-2046	3,290	260	70	80	290	0	100	2,000	490
Job Growth on Occupied Parcels	206	23	31	41	32	0	62	0	18
Job Growth within Rural Areas and Rural Settlements	273	59	0	9	77	0	0	0	127
Job Growth within Designated Employment Areas	2,811	178	39	30	181	0	38	2,000	344
Estimated Employment Land Density (net ha)	18	12	12	12	15	12	15	20	15
Employment Land Needed to Accommodate Allocation	156.5	14.8	3.3	2.5	12.1	0.0	2.6	98.3	23.0
Vacant Employment Land (including lands with the Trade and Industry Designation)	456	19.8	0.7	300.7	16.3	0.0	21.6	28.3	68.5
Additional Land Required (Net ha) (A Positive number represents sufficient land already designated)	299.3	4.9	(2.6)	298.2	4.2	0.0	19.0	(70.0)	45.5
Additional Land Required (Gross ha)	n/a	n/a	(3.8)	n/a	n/a	n/a	n/a	(104.9)	n/a

Source: Hemson Consulting