Document 1

Residential Growth Management Strategy for the New Official Plan

March 2020

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Planning, Infrastructure and Economic Development Department

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Introduction

The new Official Plan is a strategic document that describes how the city will grow over time, where we will place major infrastructure, how we will achieve our greenhouse gas emission targets, and guide the development and evolution of communities. On December 11, 2019, Council adopted new growth projections for population, housing, and employment. A series of policy directions for the new Official Plan was also adopted, establishing the framework and direction for managing projected growth throughout the Plan. In addition, the Provincial Policy Statement also provides policy direction on land use planning in Ontario, including residential growth.

The growth projections anticipate more growth annually than seen in the past, primarily based on increases in immigration, both international and domestic. The number of dwelling units by type that the Official Plan needs to accommodate are influenced by the age profile of this growth. By 2046, the city will have to accommodate the number of dwelling units by type that are established in the residential growth projections. The residential growth management strategy is the allocation of the projected dwelling units throughout the city based on guidance from the adopted new Official Plan policy directions and the Provincial Policy Statement. Employment needs will be evaluated in separately in the new Official Plan process.

The city of Ottawa is vast in size with different areas playing different roles and functions. Different parts of the city will accommodate different amounts and types of growth. The Official Plan divides the city into two main geographical areas: the rural area and the urban area. Although the rural area is geographically larger, the urban area has and will continue to accommodate most of the population, housing, and employment growth.

The residential growth management strategy first examines the rural component of the city-wide allocation, followed by how the remaining urban area will accommodate growth, primarily through intensification within the current built-up area, and through greenfield development outside of the built-up area. Three different growth management scenarios examine how different allocations lead to different growth directions to 2046. The accompanying appendices contain more detailed information that relates to some of the inputs used within the strategy.

The recommended growth scenario in this residential growth management strategy achieves the adopted new Official Plan policy directions and is consistent with the Provincial Policy Statement by:

- Achieving most of the projected residential growth by intensification
- Allocating growth around the rapid transit system
- Establishing a strategy to ensure infrastructure can support the recommended growth allocations
- Providing for a rational approach to achieve a diverse range of new housing
- Providing for more housing choice throughout the urban area
- Directing growth to provide for more transportation choice
- Directing growth to provide for greater convenience and access to daily and weekly services
- Aligning growth with established greenhouse gas emission reduction targets
- Developing new suburban neighbourhoods around rapid transit
- Developing new suburban neighbourhoods at higher densities
- Developing new suburban as complete communities and future 15-minute neighbourhoods

Section 1: New Official Plan Policy Directions and Growth Projections

The new Official Plan policy directions and growth projections were adopted by the Joint Planning Committee and Agriculture and Rural Affairs Committee on December 9, 2019 and by Council on December 11, 2019. The policy directions begin with a strategic outlook, referred to as the *Five Big Moves* through the Official Plan review process:

1. **Growth:** achieve, by the end of the Plan's planning period, more growth by intensification than by greenfield development. This growth will provide for complete communities and a variety of affordable housing options.
2. **Mobility:** by 2046, most trips in the city of Ottawa will be made by sustainable transportation (walking, cycling, transit or carpool).
3. **Urban Design:** improve our sophistication in urban and community design and put this knowledge to the service of good urbanism at all scales, from the largest to the very small.
4. **Resiliency:** embed public health, environmental, climate and energy resiliency into the framework of our planning policies.
5. **Economy:** embed economic development into the framework of our planning policies.

The policy directions for growth management include:

1. By 2046, achieve the majority of new residential units by intensification in the urban area and serviced villages;
2. Provide for a gradual increase in the intensification targets over the 25-year planning horizon;
3. Grow the city around its rapid transit system;
4. Require minimum percentage of units with three or more bedrooms for certain types of development;
5. Any urban boundary expansion will support the City's policy directions with respect to climate change, growth management, transit, and the efficient use of infrastructure;
6. Ensure city infrastructure is considered as part of any intensification or expansion strategies;
7. Ensure intensification strategy will consider housing and transportation affordability;
8. Incent intensification in targeted areas through a variety of mechanisms;
9. Permit modest expansion to a few villages to ensure their sustainability; and,
10. Encourage denser, walkable 15-minute neighbourhoods to help reduce or eliminate car dependency and promote social and physical health and sustainable neighbourhoods.

The policy directions propose a growth management approach to 2046 where most of the growth will be through intensification, and that intensification will absorb a share of the projected ground-oriented units, such as single-detached, semi-detached and rowhouses, or any new type of low-rise, ground-oriented residential built form that can provide the interior space needed by larger households.

"Growing the city around its rapid transit system" will require growth in both built-up areas and greenfield areas to be placed around the city's existing and planned rapid transit system as illustrated in Figure 1. In this context, "rapid transit" is a term intended to convey higher-order transit that generally operates in its own dedicated right-of-way, outside of mixed traffic, and therefore can achieve a frequency of service greater than mixed-traffic transit, and includes the Confederation Line, Trillium Line, and buses in dedicated rights-of-way. This growth concept will provide future residents with more transportation options, increase the efficiency of the transportation network, and reduce greenhouse gas (GHG) emissions.

Figure 1 Rapid Transit Network

The projected growth to 2046 will be about 402,000 persons and 195,000 occupied private households[1]. Within the above policy framework, the growth management strategy specifically needs to accommodate 194,808 new residential dwelling units distributed as single-detached, semi-detached, rowhouse and apartment as shown in Figure 2.

Figure 2 Projected Dwelling Units by Type, 2018 to 2046

	Single-detached	Semi-detached	Rowhouse	Apartment	Total
2018-2021	6,900	1,000	8,800	8,900	25,300
2021-2026	12,200	1,400	14,700	12,600	40,900
2026-2031	12,800	1,200	14,300	10,100	38,400
2031-2036	12,300	1,000	12,500	8,000	33,800
2036-2041	11,400	900	10,700	6,700	29,800
2041-2046	10,400	800	8,900	6,300	26,500
2018-2046	66,100	6,400	69,700	52,600	194,800
Shares	34%	3%	36%	27%	100%

[1] November 2019, City of Ottawa. *Growth Projections for the New Official Plan: Methods and Assumptions for Population, Housing and Employment 2018 to 2046*. Joint Planning Committee and Agricultural and Rural Affairs Committee, December 9, 2019.

Section 2: Provincial Policy Statement, 2020

The Provincial Policy Statement (PPS) provides policy direction relating to land use planning and development. The most recent PPS will come into effect May 1, 2020 and replaces the PPS issued April 30, 2014.The authority of the PPS is established under section 3 of the *Planning Act*, which requires that decisions affecting planning matters, including Official Plan review, "shall be consistent with" the PPS. The PPS addresses complex inter-relationships among environment, economic and social factors in land use planning and as such is meant to be read in its entirety with the relevant policies applied to each situation.

The PPS includes several policies on managing and directing growth, including residential growth management. Appendix 1 lists selected growth management related policies from the PPS. These policies provide broad directions with respect to housing mix and choice, efficient use of infrastructure, and climate change. The growth management strategy of the new Official Plan not only needs to consider each of these factors but also establish a direction that is consistent with the PPS.

Housing mix and choice is expressed through several policies that require the accommodation of an appropriate range and mix of residential uses. Housing is to be distributed geographically across the following: first, the built-up area is to accommodate a significant supply and range of housing options, also known as intensification; second, on existing vacant urban greenfield areas in the suburbs; third, in existing vacant village greenfield areas; and fourth, if required, expansion of the urban area. An appropriate housing mix and choice provides for a range of needs, such as floor space, price, privacy, proximity to transportation, convenient access to services and amenities, tenure, and at different geographic locations.

Efficient use of infrastructure is expressed through several policies that establish a link between the location of growth with the location of infrastructure. The highest efficiencies are achieved by utilizing existing infrastructure, followed by new infrastructure that is adjacent to existing infrastructure, with new infrastructure that extends further away through the rural area as the least efficient. Efficiency is also expressed as density with a compact built form that best uses infrastructure, and from a financial perspective or the ability to pay for the construction and maintenance of the infrastructure.

Climate change considerations are expressed as reduced GHG emissions, measures to adapt to climate change impacts, as well as in the design of the built environment. To maximize opportunities to achieve GHG emission reductions, urban growth should occur in a compact form, be directed to locations with transportation options that integrates active transportation, support the use of current and future transit, and minimize the length and number of vehicle trips.

Determining the appropriate range and mix of residential uses begins with the residential dwelling growth projections for the new Official Plan, where the projected new households, including vacancies and demolition replacements, are divided into four main dwelling unit types as shown in Figure 2 earlier.

A form of longitudinal analysis was used where the occupancies for cohorts, being a group of people born within a period of five years, was observed as they aged every 5 years from 1986 to 2016. Over this period patterns become evident in the preference of dwelling types and then extrapolated to 2046 to project the anticipated housing needs of the future population. However, a more fulsome reading of the PPS for the provision of an appropriate range and mix of housing types and densities does not end with projected dwelling types. While the projected dwelling types appear to provide a range and mix in totality, the PPS specifically through Policy 1.4.3 requires the following to be considered for an appropriate range and mix of housing:

- Facilitating all forms of housing required to meet the social, health, and well-being requirements of the current and future population.
- Facilitating all forms of intensification.
- Directing new housing development to where appropriate infrastructure exists or will be available.

- Promoting residential densities that effectively use land and support the use of active transportation.
- Requiring transit-supportive development and prioritizing intensification in proximity to transit.
- Establishing requirements for intensification that minimize the cost of housing while also enabling compact form

These additional considerations are the reason for which determining an appropriate range and mix of housing begins with housing projections rather than being solely defined by them. The PPS requires an appropriate range and mix of housing that includes the consideration of multiple factors.

Section 3: Geographical Growth Components of the City

The city of Ottawa is a geographically vast city with different components that will accommodate different amounts and types of growth. Within the city's boundary there is an urban area comprised of a built-up area, and a vacant greenfield area, surrounded by a large and varied rural area. The rural area contains villages that range in in size and variety, as well as scattered country lot subdivisions. These communities are part of the overall fabric of the city and are valued for their contribution to the quality of life in Ottawa.

Urban: Existing Built-up Area

The built-up area consists of areas where there was existing development as of June 30, 2018, the day before the start of the growth period for the new Official Plan. The urban existing built-up area is considered part of a Settlement Area in the PPS. It is commonplace to mistake the limits of the built-up area as the boundary of the urban area.

The built-up area can accommodate a range of dwelling units from small-scale single-family infill, to site specific applications for condominium apartments, to larger area-focused secondary plans, community design plans (CDPs), and transit-oriented development plans. These developments are referred to as intensification, being a net increase of dwelling units within the existing developed portion of the urban area. Based on secondary plans, CDPs, transit-oriented development plans and known development applications the built-up area has potential for over 100,000 dwelling units at different stages of approval. This does not include small-scale infill or other potential future projects outside of these plans or development applications.

Urban: Existing Vacant/Greenfield Area

The vacant greenfield areas are existing urban areas that are vacant as of June 30, 2018 and are permitted and planned to have future residential and community development. The urban vacant/greenfield areas are considered part of a Settlement Area under the PPS. These areas currently have an Urban Area designation within the Official Plan, but it can be visually difficult on the ground to distinguish between these areas with parts of the rural area in the Official Plan. The present land cover for these areas can include agricultural activities, or idle and shrub lands that were former agricultural lands but for a variety of reasons are no longer productive and active. Figure 3 shows the urban built-up area and the existing vacant/greenfield urban area.

Urban: Expansion Area

Conceptually, an expansion of the urban area is the addition of new land from the rural area to the urban area to accommodate future urban growth. Expanding the urban area is aligned with the PPS directions for Settlement Area expansion and is reflected in Section 2.2.1 of the current Official Plan. The expansion of the urban area will not consider lands with the following characteristics:

- Regulated wetlands including Provincially Significant Wetlands;
- Valley or escarpment land that is subject to slip or subsidence;
- Land designated Natural Environment Areas in the City's Official Plan;
- Flood Plain land;
- Bedrock and Sand and Gravel Resource land, designated and or zoned for mineral extraction, where the City has no evidence that the resource is depleted, and any license is surrendered;
- Land identified or impacted by existing and historic landfill operations; and
- Land within 1km from an existing Village (except Notre-Dames-des-Champs, which is already predominately surrounded).

Urban expansion lands are typically used near the end of the planning time horizon as shown in Figure 4.

Figure 3 Urban Built-Up Area and Existing Vacant/Greenfield Area

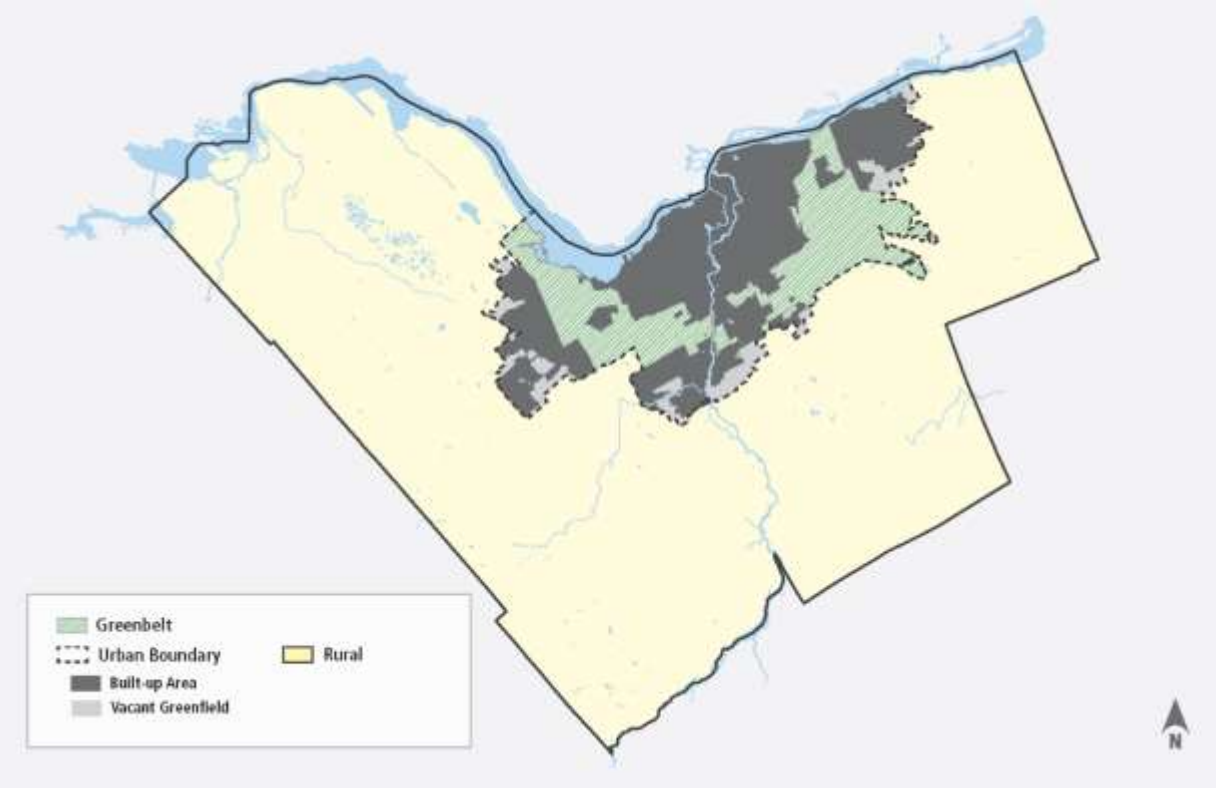
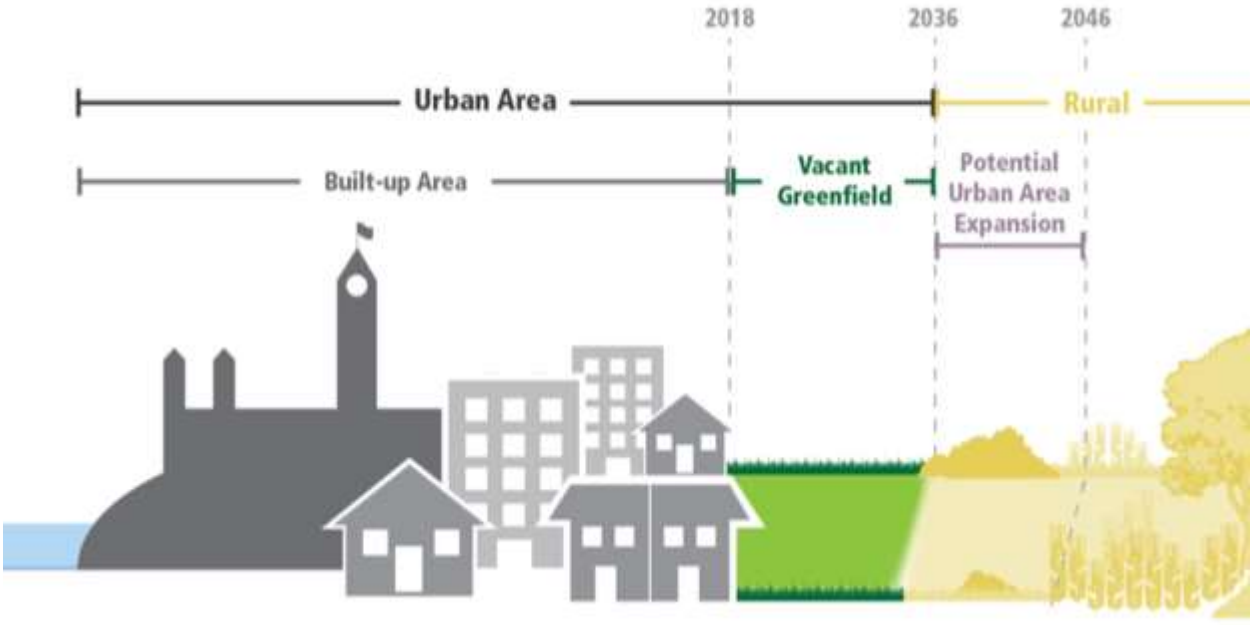


Figure 4 Illustrating the Urban Area Environments and the Rural Area



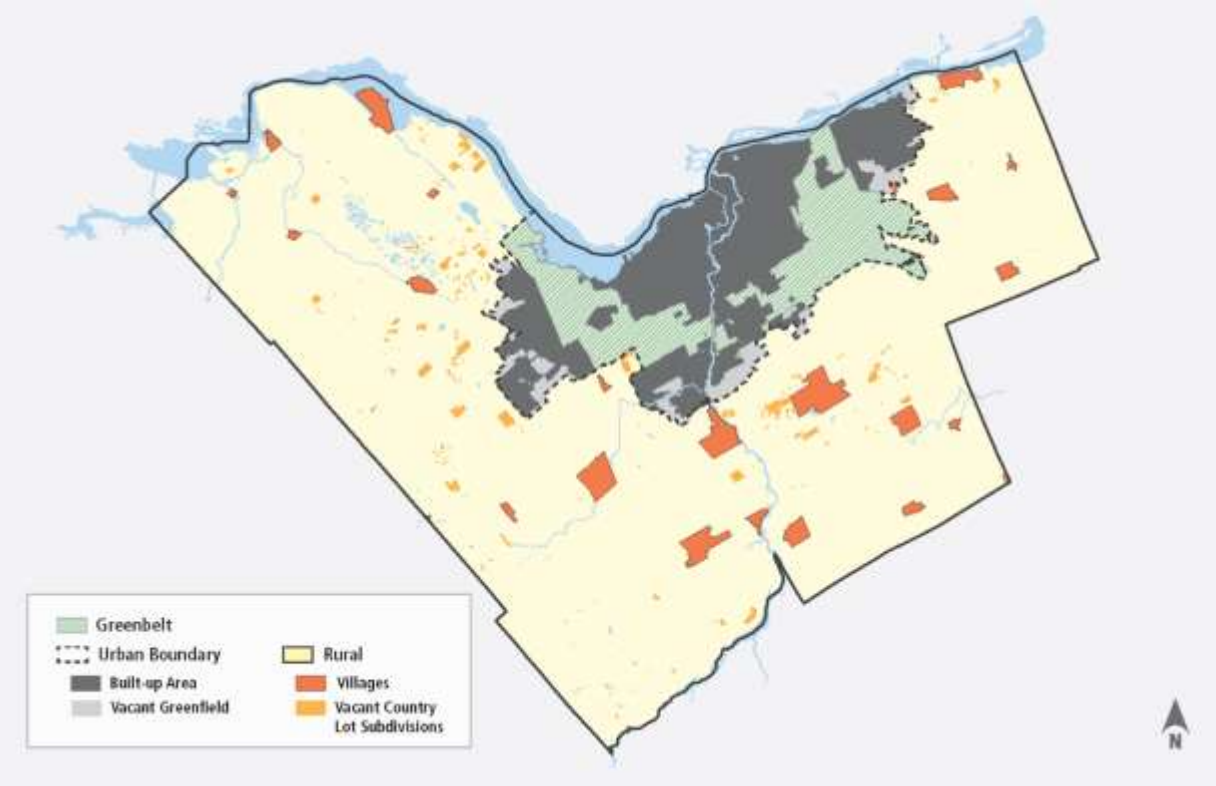
Rural: Villages

There are 26 villages in the city of Ottawa as defined in Schedule A of the current Official Plan. These villages are a distinct form of community and many of them have their own commerce and business services, employment, agriculture, education, recreation, and housing. Villages are also intended to be places for economic development, where dynamic village centres can develop and be maintained and where home-based businesses strive to fill the scale of needs in the community. However, the potential of villages to accommodate future growth varies with the availability of water and wastewater services for each village. Villages are considered as part of a “settlement area” under the PPS.

Rural: Country Lot Subdivisions

Country Lot Subdivisions consists of three or more country lots, which are usually 0.8 hectares or more in size, located in a plan of subdivision outside of villages. Although new Country Lot Subdivisions are no longer permitted there are many that remain vacant even though they may be registered, draft approved or have a pending application. Figure 5 shows the rural villages and country lot subdivisions.

Figure 5 Rural Area with Villages and Country Lot Subdivisions



Remaining Rural

The remaining rural area is geographically the largest part of the city but has the lowest amount of growth opportunities. Residential development throughout the remaining rural area will come from future residential severances, being the creation of two lots from one existing lot, and secondary dwelling units.

All growth management approaches should consider how the projected growth would be allocated to the above areas. Generally, the City has detailed information on the estimated number of dwelling units that will be accommodated on lands within existing urban greenfield, villages, and grand-parented country lot subdivisions. Minor adjustments do occur based on deviations to draft approved subdivisions, pending applications, or assumptions for lands without any applications or other higher-level secondary planning.

Section 4: History of Urban Area Expansion

In 2003, the newly formed City of Ottawa Official Plan (OP) was presented to Council with a recommendation to accommodate anticipated urban population growth and related need for housing and jobs within the then existing urban boundary to 2021. The growth management strategy at the time assumed that intensification would occur within the then built-up area and new greenfield development will occur at higher densities. New policies increased the potential greenfield residential density by introducing a minimum residential density of 29 units per hectare and requiring at least 10 per cent of new units to be apartments. Greater flexibility was provided for new development and redevelopment near transit, in *Mixed-Use Centres* and along *Mainstreets*.

After approval by the Province, the 2003 OP was appealed on the grounds that there was insufficient new land in the west of the city. The Ontario Municipal Board (OMB) agreed with the appellants position and in 2006 added approximately 470.6 hectares of land in the Fernbank area (see Area 5 on Figure 6). The land was identified as a “Developing Community” but could not be developed until a community design plan was completed and the designation amended to allow development.

In 2009, the City completed the first review of the OP, as required by the Planning Act and adopted changes to the plan through Official Plan Amendment (OPA) #76. OPA #76 modified the growth strategy to introduce residential intensification targets that would increase gradually from 36 per cent to reach 44 per cent of all new dwelling by 2031. Minimum densities of people and jobs were introduced in areas around rapid transit stations, in anticipation of the introduction of LRT service, and a higher residential density of 34 units per net hectare was applied to new suburban communities. Staff also recommended expansion of the urban area of 850 gross hectares to accommodate the projected housing to 2031. The new expansion lands were identified using site selection criteria that sought, firstly to add land as additions to existing communities where rural land and surplus service capacity was available. Council rejected the staff recommendation and only approved the addition of 230 hectares in two locations near the Fernbank area. Although approved by the Minister, OPA #76 was appealed to the OMB.

Shortly following OPA# 76 Council adopted the development plan for the Fernbank Community through OPA #77. OPA #77 included the original land approved by the OMB and two parcels of land proposed by OPA #76 located near the Fernbank land (see Area 5 on Figure 6). The result was the addition of an expanded Fernbank Community of approximately 676 hectares.

The Appeals of OPA #76 were finally settled in 2012 and added two categories of new urban land. The following numbered areas are shown in Figure 6. The first category totaling 247.4 hectares, was added in small areas in Stittsville North (Area 4) and South (Area 6), Leitrim (Areas 10 and 12) and Orléans south (Area 15). These areas immediately became part of the urban area and could proceed to development based on a plan subdivision and zoning. The second category included 730.6 hectares in larger parcels located in Kanata North (Area 1), Kanata Lakeside west (Area 2), Barrhaven south (Area 7), Leitrim east (Area 11), Orléans South (Areas 13 and 14) and part of Cardinal Creek (Area 17), which required a concept plan and Official Plan amendment for an urban designation. All theses areas except for a small area in Cardinal Creek (Area 16) became part of the urban area through OPAs #123, #173, #192, #196, #213 and #222.

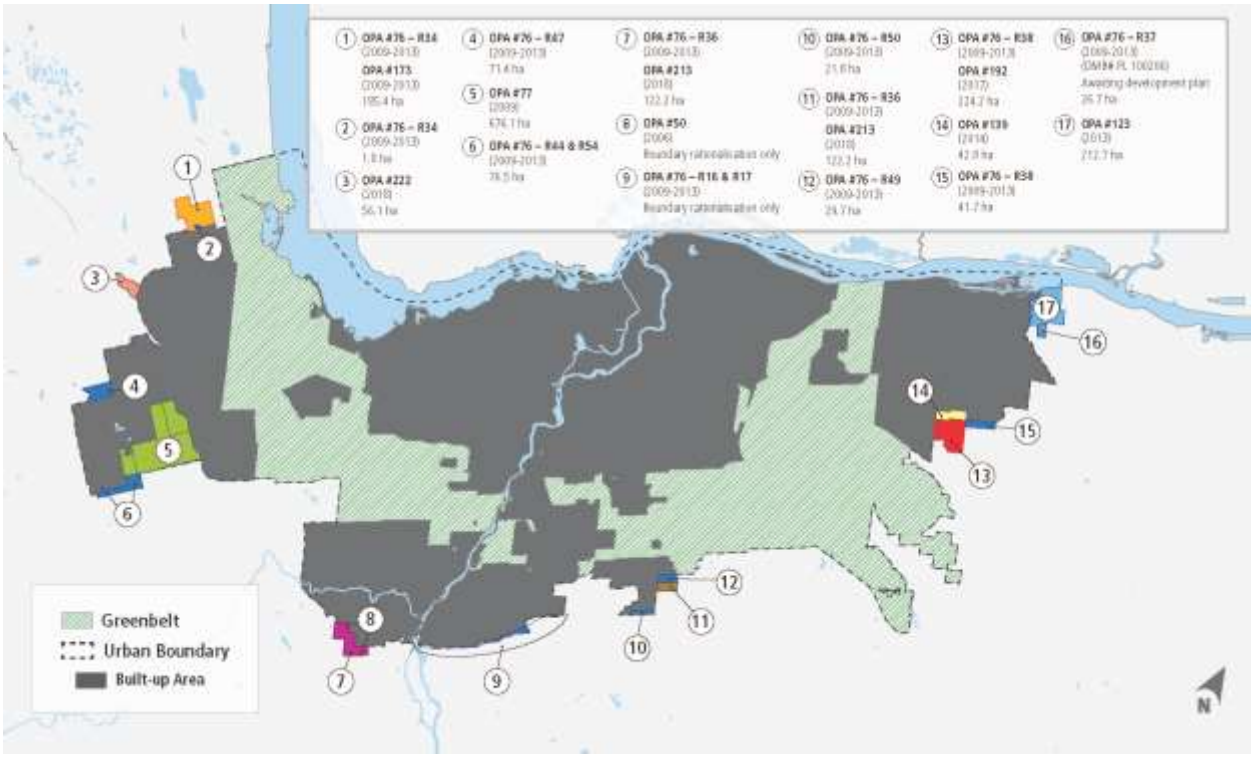
OPAs #150 (in 2013) and #180 (in 2017) made further amendments the City’s Growth Strategy to extend the planning timeframe to 2036 (OPA #180) but did not propose any additional urban land due to the amount added through OPA #76 and the higher-than-expected levels of intensification being achieved. Through OPA #180, the target for residential intensification was increased to 46 per cent of all new dwelling units by 2036. The required density of residential development in urban greenfield areas remained 34 units per net hectare, which by then was being exceeded by most of the new suburban communities.

OPA #180 was appealed by landowners challenging the City’s projection of housing needs to 2036 through OPA #180 and how the then housing projection influences the existing designated residential

land supply. This appeal remains open and has been placed on hold by the appellants pending the outcome of the growth management portion of the current Official Plan review.

Figure 6 shows the locations of the various historical Official Plan Amendments relating to expansion throughout this part of the strategy.

Figure 6 Map of Urban Expansion Locations



Section 5: Intensification

Intensification is development that results in a net increase within an existing developed area. This section of the report will review the definitions for intensification, how intensification rates are used for growth management, the achieved intensification rates based on variations of the definition, the composition of achieved intensification by dwelling type, and the new Official Plan policy direction on how intensification can be used for additional new opportunities.

Definition

Intensification occurs within the built-up portion of the urban area and villages and can be both residential and non-residential uses. Intensification is a defined term in the PPS:

> "**Intensification**: means the development of a property, site or area at a higher density than currently exists through:
>
> a) redevelopment, including the reuse of brownfield sites;
>
> b) the development of vacant and/or underutilized lots within previously developed areas;
>
> c) infill development; and
>
> d) the expansion or conversion of existing buildings."

The current Official Plan also defines intensification through Policies 1 and 2 in Section 2.2.2:

1. Residential intensification means the development of a property, building or area that results in a net increase in residential units or accommodation and includes:
    a. Redevelopment (the creation of new units, uses or lots on previously developed land in existing communities), including the redevelopment of Brownfield sites;
    b. The development of vacant or underutilized lots within previously developed areas, being defined as adjacent areas that were developed four or more years prior to new intensification;
    c. Infill development;
    d. The conversion or expansion of existing industrial, commercial and institutional buildings for residential use; and
    e. The conversion or expansion of existing residential buildings to create new residential units or accommodation, including secondary dwelling units and rooming houses.
2. Employment intensification means the development of a property, building or area that results in a net increase in jobs and/or gross floor area and may occur by:
    a. Redevelopment of existing employment uses at a higher density (e.g. the creation of an office building that replaces a lower density use on previously developed land), including the redevelopment of Brownfield sites;
    b. Expansion of existing employment uses (e.g. a manufacturing plant expanding its operations on site);
    c. Infilling of vacant or underutilized land within Urban employment lands as identified in Policy 1 Section 2.2.3;
    d. Replacing uses with a low number of employees with uses having a higher number of employees.

The current Official Plan also establishes targets for residential intensification, being a percentage of total new residential dwelling unit building permits issued by calendar year within the urban area. The targets increase incrementally every five years as follows:

- 2017-2021: 40 per cent
- 2022-2026: 42 per cent
- 2027-2031: 44 per cent
- 2032-2036: 46 per cent

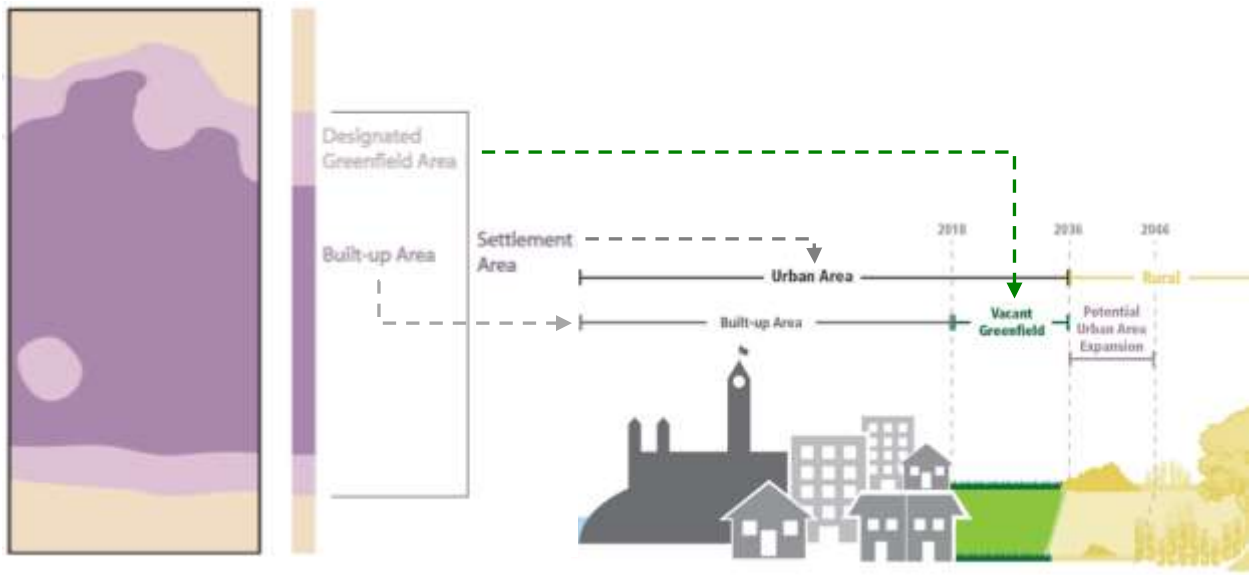
Increasing these targets by the same increment would provide the next five-year targets as follows:

- 2037-2041: 48 per cent
- 2042-2046: 50 per cent

In the Greater Golden Horseshoe of Ontario, *Places to Grow*, was a growth plan for the greater Toronto and Hamilton area established by the province in 2006 and has recently been updated through *A Place to Grow*. This growth plan uses intensification targets as a growth management tool and establishes a built boundary line between the built-up area and greenfield area of municipalities on a given date, being June 16, 2006 being the effective date of *Places to Grow*. This built boundary is fixed in time for the purposes of implementing intensification and greenfield growth where residential development occurring within the built boundary will be counted as intensification and development outside of the built boundary will be counted as greenfield. The province established the built boundary on behalf of all the municipalities subject to *Places to Grow*.

Ottawa is not subject to this growth plan and a built boundary was not conducted for this region by the Province. However, the City utilizes a similar approach through its annual *Vacant Urban Residential Land Survey* where greenfield parcels are identified. Although this survey is based on a calendar year, an update of the 2018 survey to a June 30, 2018 time frame effectively establishes a built boundary for the purposes of residential growth management, with growth beginning on July 1, 2018. Figure 7 illustrates how the built boundary concept in the *Places to Grow* translates to the built-up and greenfield areas described in Figures 3 and 4 in Section 3 for the purposes of growth management.

Figure 7



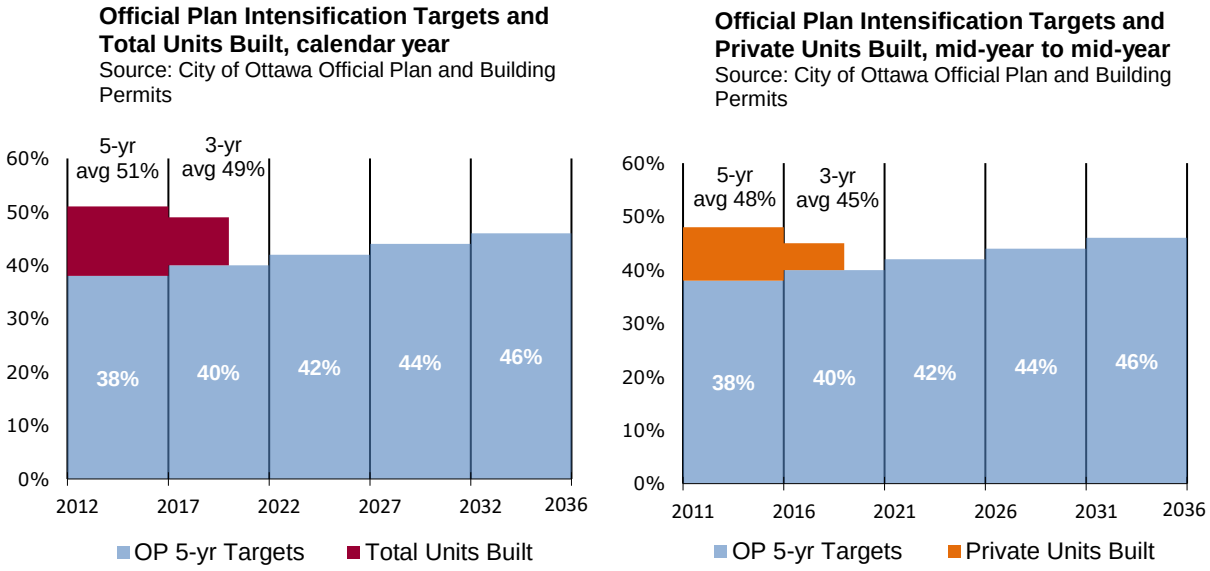
Establishing an intensification target is a method of managing growth by directing where and how growth should occur within a municipality. Reviewing past and current rates of intensification can help provide a basis for future intensification targets. However, some adjustments to Ottawa's reported intensification rates are required to align with the growth projections shown in Figure 2 and to determine the required residential land needs to 2046.

Achieved Intensification Rates

The current Official Plan definition of intensification refers to "residential units or accommodation" and as such includes private dwelling units such as single-detached, semi-detached, rowhouse, and apartments, and collective units such as hospitals, certain retirement homes, student residences, shelters, and prisons. The achieved rate of the Official Plan definition for intensification is reported annually by the Planning, Infrastructure, and Economic Development Department in each edition of the *Annual Development Report*. These intensification rates include collective dwellings and are for the calendar year. The 2018 edition of the Annual Development Report[2] shows that intensification rates that include collective dwellings have been exceeding the Official Plan targets. From 2012 to 2016 the achieved intensification rate with collective dwellings was 51 per cent and from 2017 to 2019 was 49 per cent.

However, the growth projections refer to the need for private dwelling units only and are based on July 1 for a given year, or "mid-year". Removing collective dwelling units from the achieved intensification rates reported in the *Annual Development Report* and adjusting to a mid-year cycle will provide a more comparable statistic for residential growth management purposes. Figure 8 compares the Official Plan intensification targets and the intensification rates achieved between total dwelling units and private dwelling units since 2011.

Figure 8 Achieved Total Dwellings and Private Dwellings Intensification Rates



The average achieved intensification for private units for the five-year period between 2011 to 2016 was 48 per cent, three per cent less compared to the intensification rate for total units by calendar year. The average achieved intensification for private units between 2016 and 2018 was 45 per cent, four per cent less compared to the intensification rate for total units.

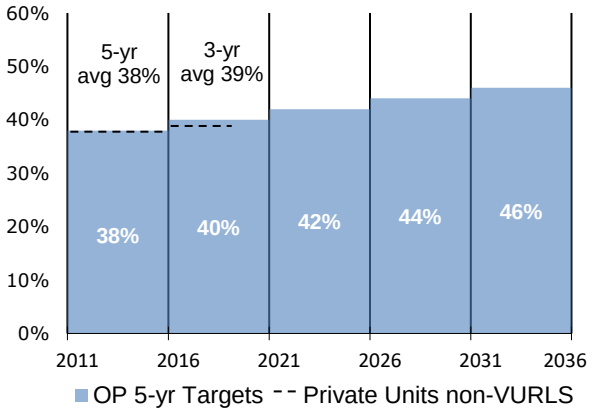
Although intensification is commonly assumed to occur within the inner urban communities, intensification also occurs in the suburbs as well. One of the sources of intensification in the outer suburban areas is from remnant greenfield development parcels. Vacant greenfield parcels do not always develop in a linear manner from the built-up area. In some instances, remnant vacant greenfield parcels may become surrounded by development if construction is delayed. This creates intensification parcels on the periphery of the built-up area. The Official Plan definition of intensification (approved through an Ontario Municipal Board hearing) would consider a vacant parcel as "intensification" if it is surrounded by adjacent

[2] City of Ottawa, 2019. *2018 Annual Development Report*, page 8.
https://documents.ottawa.ca/sites/documents/files/ADR_2018_Full_Report_FINAL.pdf

development that is four or more years older. However, many of the units that are included within the reported intensification rate were at one time greenfield lands. Including these units within the intensification rate to be applied to future growth will allocate their share of growth to the built-up area rather than the greenfield area from which they originated. The inclusion of these Vacant Urban Residential Land Survey (VURLS) parcels have an impact on the achieved intensification rate. Figure 9 shows the intensification rate of private dwellings with the units built on the remnant greenfield/VURLS parcels removed.

Figure 9 Achieved Intensification Rates from Private Dwellings excluding VURLS Parcels

Official Plan Intensification Targets and Private Units Built, non-VURLS mid-year
Source: City of Ottawa Official Plan and Building Permits

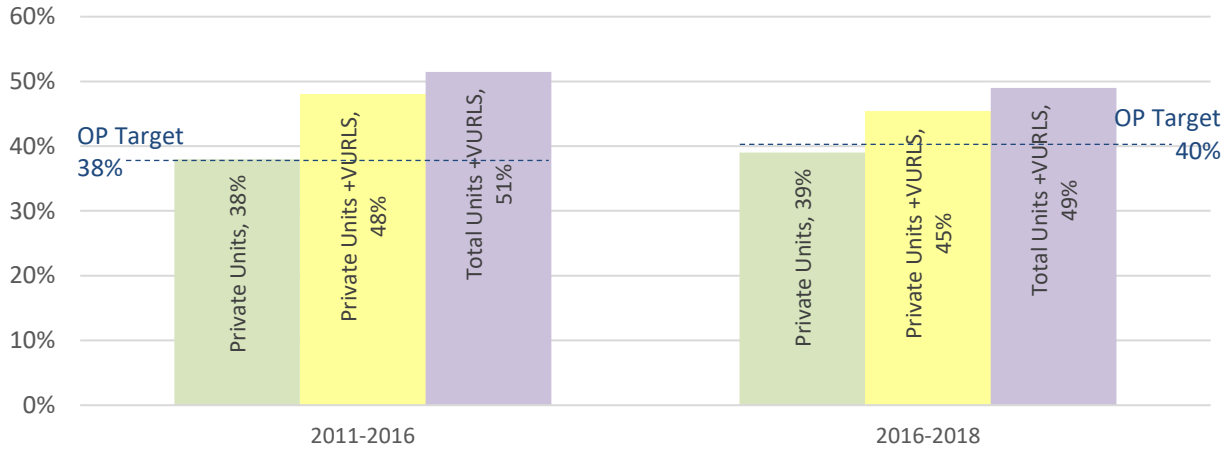


The average achieved intensification rate for private units excluding the VURLS parcels for the first five-year period between 2011 to 2016 was 38 per cent, 10 per cent lower than with the VURLS parcels included and 13 per cent lower than when counting with total units. The average achieved intensification rate for private units excluding the VURLS parcels between 2016 and 2018 was 39 per cent, six per cent less than with the VURLS parcels included and 10 per cent less than the total units.

For growth management purposes, the intensification rate should be calculated to align with the growth projections. This requires shifting the measurement of intensification from a calendar year to a mid-year basis and to include only private dwellings. To align with a growth management method that uses a built boundary at a fixed point of time to allocate between built-up and greenfield areas as described in Section 3, intensification that has occurred on VURLS parcels should also be excluded. This establishes an intensification rate that is comparable to the one measured under the growth plan for the Greater Golden Horseshoe, as a starting point for growth management. These adjustments to the intensification rate are only for growth management purposes. The ongoing intensification that is reported in the Alternative Dispute Resolution (ADR), which more closely aligns with the broader definition of intensification in the Official Plan and the PPS, represents the totality of residential development achieved through intensification and remains a relevant statistic to report and benchmark the success of City planning policy. While intensification as defined in the Official Plan will eventually occur on greenfield areas, the lands need to be identified as greenfield first through a land budget exercise.

Figure 10 summarizes the differences in achieved intensification between private dwelling units excluding VURLS intensification parcels, private dwelling units with VURLS intensification parcels, and total units with VURLS intensification parcels. To be consistent with the growth projection method for determining private dwelling units and growth allocation using a built boundary starting on June 30, 2018, the achieved intensification rates of private dwelling units excluding VURLS intensification parcels should be used as the basis for establishing future intensification targets for the new Official Plan. This rate was 38 per cent from 2011 to 2016 and 39 per cent from 2016 to 2018. In comparison the Official Plan intensification target was 38 per cent and 40 per cent respectively for the same periods. Based on historical rates and anticipated development, the average intensification rate for 2018 to 2021 is estimated to be at 40per cent and this rate should be the starting intensification rate for the 2018 to 2021 period of the growth projections.

Figure 10 Comparison of Achieved Intensification Rates



Composition of Achieved Intensification by Dwelling Types

Over the past 10-years apartments (rental and condominium) have been the primary component of growth within the built-up area, comprising about 81 per cent of all units as shown in Figure 11. Ground-oriented units, being single-detached, semi-detached, and rowhouses made up the remainder at 19 per cent.

Figure 11 Built-up Area Ground-Oriented and Apartment Growth

Permits, 2010-2019	Ground-oriented	Apartment	Total
Built-up Area Growth	4,200	18,100	22,300
% of Growth	19%	81%	100%

In contrast, ground-oriented units have been a minor component of growth within the built-up area, absorbing 11 per cent of the overall ground-oriented supply as shown in Figure 12.

Figure 12 Intensification and Greenfield Components of Ground-Oriented

Permits, 2010-2019	Ground-oriented	% by Area
Built-up Area	4,200	11%
Greenfield Area	32,000	89%
Urban	36,200	100%

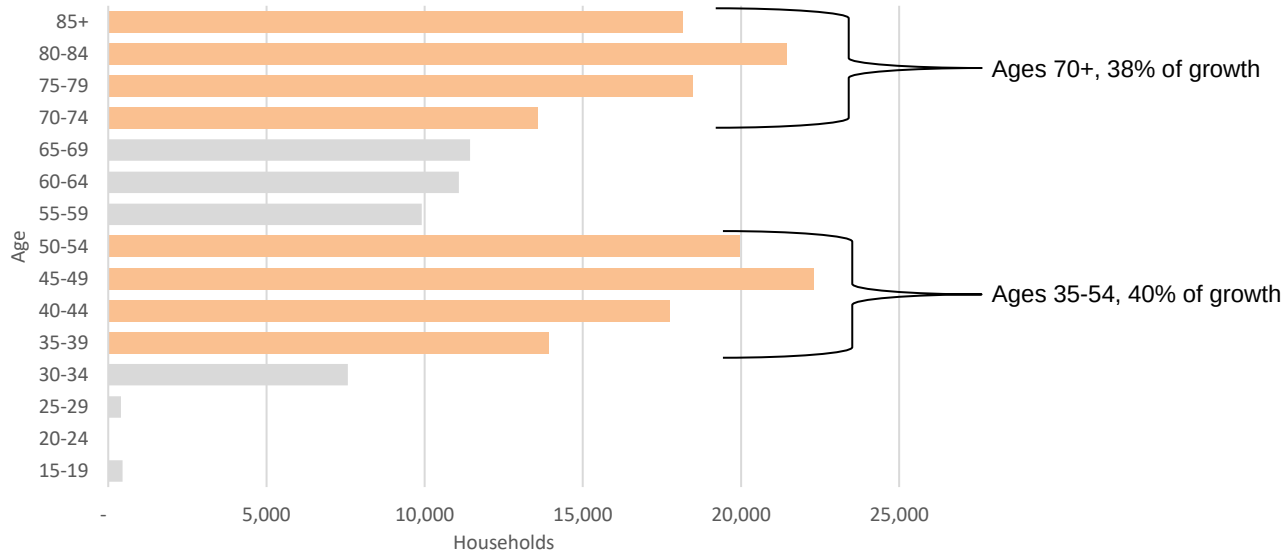
Ground-Oriented Dwellings in the Built-up Area

Development within the built-up area has mainly been comprised of apartment units, which primarily consist of dwellings of two-bedrooms or less in size. However, one- or two-bedroom apartments cannot typically replace the projected demand for ground-oriented dwelling units and intensification has not traditionally provided a significant amount of ground-oriented dwelling supply. The primary driver for the ground-oriented dwellings is interior space for families or larger households more so than a dwelling typology that is simply detached. This can be seen historically as family or larger households shifted from single-detached dwellings to rowhouse dwellings[3], with the most likely significant factors being lower prices combined with enough floor space. This shows a willingness by some households to occupy an attached built form, provided the attached built form provides comparable conditions that what was traditionally provided in a detached built form.

[3] November 2019, City of Ottawa. *Growth Projections for the New Official Plan: Methods and Assumptions for Population, Housing and Employment 2018 to 2046*. p.21-22. Joint Planning Committee and Agricultural and Rural Affairs Committee, December 9 2019.

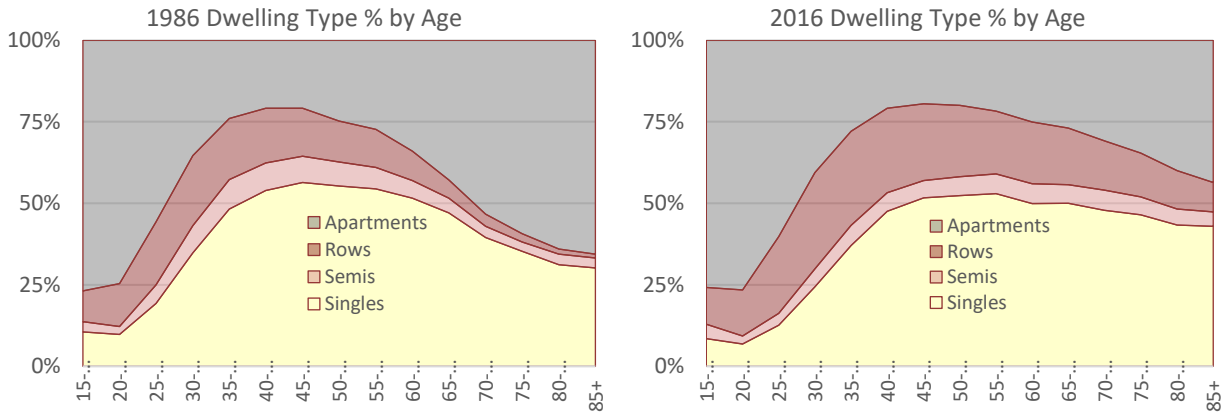
The population to 2046 is projected to be older, with growth concentrated in two main segments: those aged 35 to 54, and those aged 70 and over. These age groups represent almost 80 per cent of the projected private housing growth, as shown in Figure 13. Those aged 35 to 54 will mostly be family-based and those aged 70 and over are lowering household sizes. Those aged 34 to 54 will tend to form family-type households with space needs for multiple persons within their household, with the older segment of this group already in their starter homes. There are multiple scenarios where people are added to households but generally a spectrum spans from bearing children to integrating aging parents and can include combinations within. The population and housing projections do not provide details on future household sizes or the nature of their composition but households with space needs for multiple people are projected to be one of the main drivers of housing to 2046. Planning for dwellings that are large enough to accommodate space needs will provide flexibility to the variety of scenarios that can increase the sizes of households that originally formed with one- or two-persons.

Figure 13 Projected Private Household Growth by Age of Maintainer, 2018 to 2046



This phenomenon of increasing space needs for those age 35 to 54 can be seen in census data where household maintainers increased their preferences for ground-oriented dwellings at ages 30 to 34. Figure 14 shows ground-oriented preferences increasing for these age groups in both the 1986 Census and 2016 Census. The desire for housing space at these age groups will continue over the next 25 years.

Figure 14 Dwelling Type Occupancies by Age of Household Maintainer, 1986 and 2016



Additional intensification opportunities for residential units larger than two-bedrooms need to be provided for those seeking more space than typical one- or two-bedroom apartments. Three-bedroom units in high-rise condominium and rental apartments can provide some of these opportunities but their impact is anticipated to be minor. The reason for this is that a small amount of such units is expected to be built due to the costs of high-rise construction that translates into higher price per square foot of habitable floor area, in addition to condominium fees. Other, more significant opportunities can include significant redevelopment of large tracts of land within the built-up area, or the provision of zoning permission for a range of new low-rise dwelling forms that is denser than single- or semi-detached dwellings that can be developed and incorporated throughout all of the existing communities.

However, there are only so many large tracts of lands within the built-up area that are proposed for redevelopment. For example, the most recent LeBreton Flats redevelopment proposes approximately 4,000 dwelling units, with most being in the form of one- and two-bedroom condominium and rental apartments. However, there are few large contiguous sites remaining in the urban portion of the city. Ottawa does not have large former manufacturing, warehousing, and other similar types of sites to convert to residential uses like some other cities. It would be difficult to continually rely on large tracts of lands of redevelopment as the main source of additional intensification supply.

A more sustainable approach pursues the strategy of developing a range of new low-rise dwelling forms that could develop on existing lots within established neighbourhoods. Future intensification in Ottawa should then be of increasingly finer grain with easy sites developing early in the planning horizon. This approach would not rely on a single landowner or consortium of landowners to be ready for redevelopment on a large lot but would spread the ground-oriented dwellings throughout the built-up area as redevelopment opportunities arise.

New Ground-Oriented Intensification Opportunities: “613 Flats”

One of the growth management policy directions is to require a minimum per centage of residential units with three or more bedrooms for certain types of development. This direction is intended to provide more housing options for those needing more space than is provided by one- or two- bedroom apartments. Currently options are limited to less than a hundred units per year for new infill construction, the resale market, or larger new apartment condominium units with high prices per square foot.

These new intensification opportunities should have “**6** rooms in **1** unit, with at least **3** bedrooms”. The remaining three rooms would be a kitchen, living room, and bathroom. For reference in this report, this new concept is labelled as a “613 Flat”. To allow for flexibility, 613 Flats could also be based on a minimum floor size rather than three bedrooms, provided the floor area is enough to create at least three bedrooms. This concept provides an option for two parts of the housing market: households that are in a smaller dwelling such as a one-bedroom condominium or rental apartment, and need more space; or households that are in a larger dwelling such as a 3,000 square foot single-detached looking to downsize, but not necessarily to less than a third of their current floor space.

613 Flats are intended to increase the densities on existing lots going through redevelopment, by replacing one existing unit with multiple new units, the number depending on the size of the lot. Preliminary work shows that a residential lot measuring 12.2-metres wide by 30.5-metres deep could accommodate up to three 613 Flats while a 18.3-metre wide by 30.5-metre deep lot could accommodate four 613 Flats. Additional secondary dwelling units may also be possible to provide rental income or other options such as inter-generational housing. Figures 15 and 16 conceptually illustrates pre- and post-613 Flat redevelopments based on freehold ownership.

Figure 15 12.2 metre x 30.5 metre Lot Accommodating Three 613 Flats

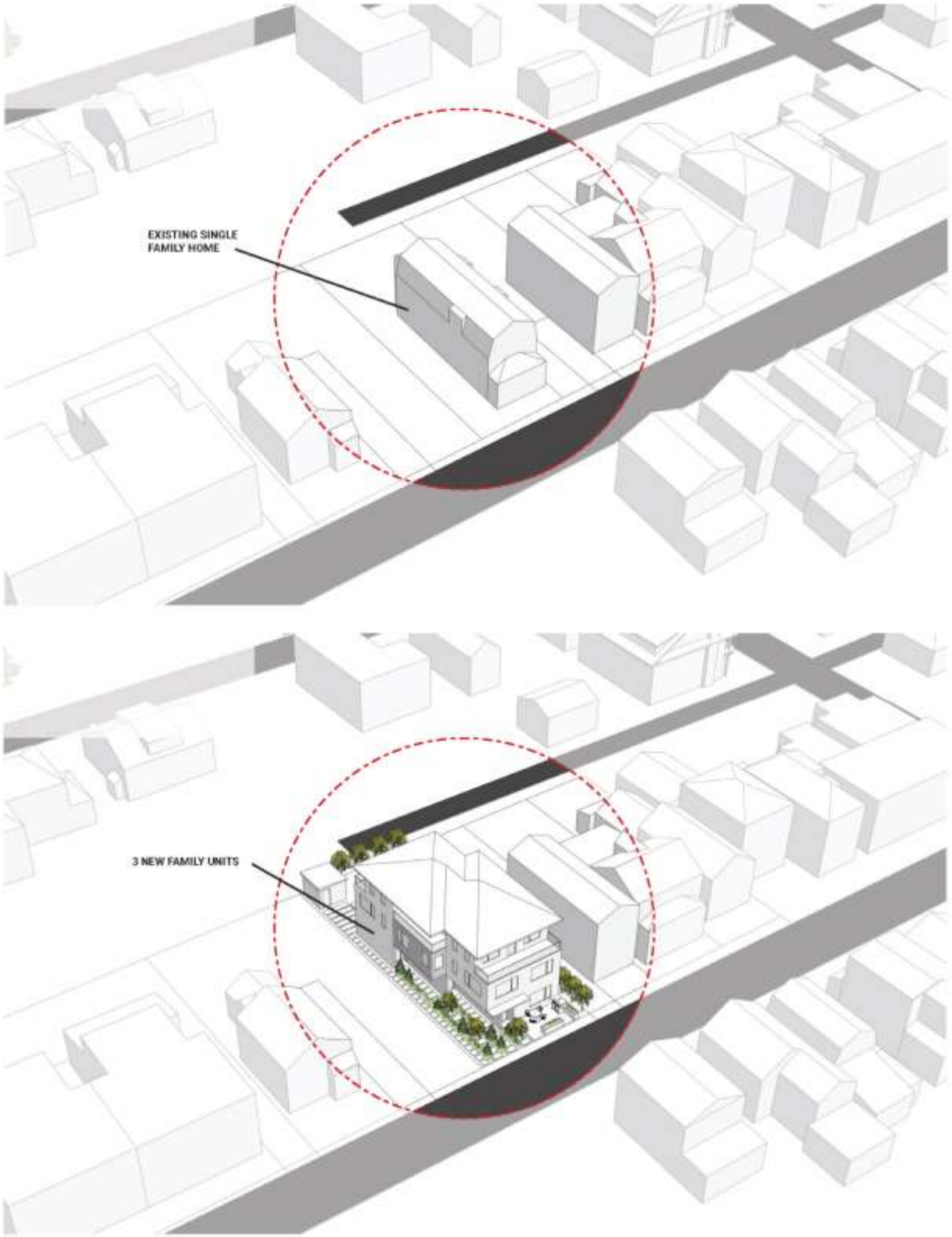


Figure 16 18.2 metre x 30.5 metre Lot Accommodating Four 613 Flats

Figure 17 compares the densities of a single-detached dwelling on various lot size with those of a 613 Flat redevelopment on the same lot.

Figure 17 Densities Before and After a 613 Flat Redevelopment

Width (metres)	Length (metres)	Hectares	New units	Density Before (units per hectare)	Density After (units per hectare)
12.2	30.5	0.04	3	27	81
15.2	30.5	0.05	4	22	86
18.3	30.5	0.06	4	18	72
41.1	30.5	0.13	8 - 12	8	64 - 96

This type of development does not exist in Ottawa's market today in any meaningful form. For this to happen over the next 25 years, the City has to try to remove zoning and regulatory barriers including refinements to the development review process, establish an infrastructure plan that identifies and alleviates challenges, and review the impacts of Development Charges and other mechanisms to incentivize a market transformation. Links will have to be made with other projects so that the implementation of this development concept and its relationship to growth management is considered and appropriately prioritized amongst other project objectives. The 613 Flats concept will be further analysed for implementation barriers and challenges throughout the new Official Plan process.

Additional Intensification: 15-minute Neighbourhoods

The new Official Plan policy directions are for most of growth to occur through intensification, grow the city around its rapid transit system, and to require a minimum percentage of residential units with 3 or more bedrooms for certain types of development. As shown in Figure 11, intensification over the past 10-years has been comprised of 81 per cent apartments and 19 per cent ground-oriented dwellings.

To achieve the new Official Plan policy directions, ground-oriented dwellings need to increase their share of intensification and overall additional intensification needs to occur around the full extent of the existing and planned rapid transit system.

To offer comparable housing to what would traditionally have been developed on greenfield lands, this additional intensification should be through units that can accommodate 3 or more bedrooms, such as 613 Flats. The policy direction to encourage 15-minute walkable neighbourhoods can help guide where this additional intensification should occur within the built-up area.

One of the policy directions for the new Official Plan is to achieve denser, 15-minute walkable neighbourhoods to help reduce or eliminate car dependency and promote social and physical health and sustainable neighbourhoods. The current Official Plan focuses intensification within the *Central Area, Mixed-Use Centres, Town Centres, Transit-Oriented Development areas* and along *Arterial Mainstreets*, collectively referred to as "intensification target areas". These designations are an articulation of a "Nodes and Corridors" planning concept of concentrating future growth to make more efficient use of land.

These areas that have been designated as such include, to varying degrees, elements of a 15-minute neighbourhood including the presence of a station along the O-Train or Transitway and daily or weekly commercial services. However, the elements of a 15-minute walkable neighbourhood are not all present in many of the intensification target areas that are further removed from the centre of the city. In addition, there are adjacent areas that are a part of more walkable, 15-minute neighbourhoods, and should also be a focus for growth and continued evolution into more complete communities but are not currently intensification target areas.

The new Official Plan will seek to articulate intensification, and notably low-rise, ground-oriented intensification, in 15-minute neighbourhoods in two ways. First, the nodes and corridors structure will be further applied in a more fine-grained manner across the urban area. New corridors will be designated to correlate with approved rapid transit lines, such as the O-Train and Transitway, and frequent bus routes

within established neighbourhoods and to new intensification areas. Nodes and corridors will continue to be the locations for higher density development and taller buildings, in accordance with context. Second, the neighbourhoods that are adjacent to these nodes and corridors will also have more guidance as appropriate locations for new types of low-rise, ground-oriented forms, such as 613 Flats. Nodes, corridors, and neighbourhoods will combine to form 15-minute walkable communities. Stage 2 O-Train stations and stations along the planned Baseline and Carling Transitways are examples of the most likely focal points for 15-minute walkable communities and additional intensification opportunities.

15-minute neighbourhoods can also help with housing affordability. Often housing affordability focusses only on the dwelling unit and often does not include the transportation costs required to access work and services from the location of that unit. Transportation costs represent a significant portion of annual household expenditures, averaging around 15% (compared with around 22% for shelter)[4].Research in the Greater Toronto Area has shown that, in general, housing and transportation costs combined are higher outside the cities of Toronto and Hamilton than within[5]. This disparity is largely because of higher transportation costs in lower density areas that typically have less transit service, fewer opportunities for walking and cycling for daily trips, and a greater need for car travel. The proximity and therefore access to transit and services that are required throughout the week is a central idea of 15-minute walkable neighbourhoods. Convenient and comfortable walking and cycling links are also critical. Focussing growth in proximity to such amenities will provide more transportation options, either for commuting and/or accessing daily needs, and provides an environment that is less automobile dependent. This will allow more residents to reduce or avoid the costs associated with car use and ownership, reducing their overall cost of living and making a greater share of household expenditure available for other purposes, including housing costs.

Preliminary estimates show that nodes and corridors could reasonably accommodate approximately 20,000 dwelling units with three or more bedrooms in building forms such as condominium or rental apartments and stacked rowhouses. In the neighbourhoods adjacent and within walking distance to the nodes and corridors, 37,000 dwelling units with three or more bedrooms could be accommodated assuming approximately 15 per cent of the existing lots redevelops into 613 Flats. Combined, the beginnings of what could be defined as 15-minute neighbourhoods have the potential to reasonably accommodate 57,000 dwelling units that are sized with three or more bedrooms, within the projection period. The potential in the post-2046 timeframe is expected to grow.

However, this is only a theoretical supply that does not include absorption timeframes. The ability of existing infrastructure, the capacity of the home-building industry to construct additional intensification, changes to the Zoning By-law and the number of households that will occupy these units annually will ultimately establish how much additional intensification can be provided or absorbed by 2046. Ensuring that the infrastructure is considered as part of an intensification strategy through adequate capacity and addressing constraints is also an Official Plan policy direction. The Infrastructure Master Plan update will describe available capacities and the strategy to address constraints.

Enabling these types of developments within established neighbourhoods will require implementation through Official Plan policy and the Zoning By-law. This may include minimum requirements for the number of units on a lot and unit sizes in order to ensure that infill and redevelopment opportunities are not supplanted by other built forms or smaller unit sizes that would not achieve the objectives of providing additional units with three or more bedrooms in appropriate locations.

[4] Statistics Canada, 2017. *Household spending, Canada, regions and provinces.* https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=1110022201

[5] Miller, E., M. Roorda, M. Haider, A. Mohammadian, 2004. *An Empirical Analysis of Travel and Housing Costs in the Greater Toronto Area.* A Paper Submitted to the Transportation Research Board (TRB) For Presentation at the TRB 2004 Annual Meeting.

Section 6: Projected Demand and Existing Supply

The growth projections adopted by Council on December 11, 2019 estimates that between 2018 and 2046 the population of Ottawa will grow to almost 1,410,000 persons, a growth of about 402,000 people. This population will form about 194,800 new private households, being those in private dwellings that exclude collective establishments. The needs of these private households are further categorized between dwelling types determine how much land is required to accommodate these future homes. This is because different dwelling types develop at different densities and require different amounts of land. The four main dwelling types are single-detached, semi-detached, rowhouse, and apartment.

Section 3 of this report identified the various parts of the city that have potential to accommodate this projected growth. These areas are differentiated primarily as being either in the rural area or the urban area. Although both the urban area and villages are considered "settlement areas" in the PPS, villages are considered to be part of the rural area, being the focus of rural growth.

Rural Supply

Most of the rural supply is within villages, which are the centres of rural growth. The amount of vacant infill and greenfield areas within each village is reported once every two years through the Rural Residential Land Survey. The 2017-2018 Survey was used as the basis to estimate the vacant greenfield areas to accommodate future growth for the new Official Plan. The vacant Village areas are estimated to be able to accommodate about 10,000 dwelling units, of which 9,800 are anticipated to be in the form of single-detached, semi-detached, and rowhouse type dwellings as of July 1, 2018 (Appendix 3).

Most of the growth within villages will occur in the large villages that have municipal water and wastewater services, also known as "serviced villages". Although there may be opportunities to review the planned service capacities for the serviced villages, significant additional village growth through expansion will be limited due to village boundaries being adjacent to Agricultural Resource Areas. Growth in the non-serviced villages will be more modest due to a consumer preference for municipal water and wastewater services and the constraints that private services has for increasing existing density. From a growth management perspective, villages should continue being centres of rural growth rather than being additional opportunities for potential urban growth. The urban area, including greenfield development, provides closer access to a greater variety of employment, services, and amenities.

After villages, country lot subdivisions have the next most potential in the rural area. The vacant country lot subdivisions are anticipated to be able to accommodate approximately 2,200 single-detached units as of July 1, 2018.

Development in the remaining rural area will mostly occur through residential severances. These severances are not anticipated to represent a significant amount of new housing, with approximately 40 new lot creations annually over the past decade[6]. Assuming the same rate of new lot creation continues, the remaining rural area has potential for just over 1,100 new single-detached units.

In addition to severances, a small number of new secondary dwelling units and coach houses also occur throughout the rural area. Secondary dwelling units are a separate dwelling unit that is subsidiary to and located in the same building as the associated principal dwelling unit. For example, a "basement suite" with a separate entrance is considered a secondary dwelling unit. A coach house is a separate dwelling unit that is subsidiary to and located on the same lot as an associated principal dwelling unit but is contained in its own building that may also contain uses accessory to the principal dwelling. For example, a detached garage renovated to include a suite above is considered a coach house.

Figure 18 shows the historical construction of secondary dwelling units and coach houses in the rural area. Only three years worth of data is shown for coach houses as they were approved for development in October 2016. Assuming a continuation of the annual average of 12 dwelling units provides about 330

[6] June 2019, City of Ottawa. *Rural Residential Land Survey, 2017-2018 Update*. https://documents.ottawa.ca/sites/default/files/rural_res_land_survey_2017_18_en.pdf

new secondary dwelling units and coach houses, which are considered as apartments for projection purposes, to 2046.

Figure 18 Rural Building Permits for Secondary Dwelling Units and Coach Houses

Rural Permits	Secondary Dwelling Unit	Coach House	Total
2010	10		10
2011	5		5
2012	12		12
2013	8		8
2014	7		7
2015	9		9
2016	7		7
2017	9	2	11
2018	8	3	11
2019	10	5	15
Total	85	10	95
Annual Average	9	3	12

In total, the rural area is estimated to have a capacity of 13,600 dwelling units, the majority being single-family detached as shown in Figure 19.

Figure 19 Estimated Rural Supply

Known Supply, July 1 2018	Single-detached	Semi-detached	Rowhouses	Apartments	Total
Villages	8,700	200	900	200	10,000
Country Lot Subdivisions	2,200				2,200
Rural Remaining	1,100			300	1,400
Rural Area	12,000	200	900	500	13,600

By 2046, most of the known rural units are expected to be developed within the large villages of Richmond, Manotick and Greely that have municipal water and wastewater services. The rural area is anticipated to accommodate almost 7 per cent of the projected growth to 2046, about 13,000 dwelling units, with assumed vacant lots remaining within villages and country lot subdivisions. The urban area will accommodate the remaining units as shown in Figure 20.

Figure 20 Projected Dwellings: Rural and Urban Areas, 2018-2046

Area	Dwellings
City-wide	194,800
Rural	13,000
Urban	181,800

The remaining 181,800 urban dwellings represents the demand for projected housing within the urban area, with the majority are projected to occur in rowhouses (38 per cent), followed by single-detached (30 per cent), apartments (29 per cent) and semi-detached (3 per cent) as shown in Figure 21.

Figure 21 Projected Demand: Rural and Urban Area Dwellings by Type, 2018-2046

Area	Single-Detached	Semi-Detached	Rowhouse	Apartment	Total
City-wide	66,100	6,400	69,700	52,600	194,800
Rural	11,500	200	900	400	13,000
Urban	54,600	6,200	68,900	52,200	181,800
Urban % by dwelling	30%	3%	38%	29%	100%

Urban Supply

In Section 3 Growth Areas, the urban area is shown to be made of two areas, the built-up area and the existing vacant/greenfield area. To estimate the urban supply, the approach in the previous Official Plan review began by applying an incrementally increasing intensification rate that was averaged over the growth period and multiplied by the total urban demand. The number of dwellings by type was estimated from the total intensification units and subtracted that number from the projected urban demand leaving the remaining urban dwelling units. The estimate of the existing vacant/greenfield supply was then subtracted from this remainder to determine whether there was sufficient greenfield supply or if an urban area expansion was required.

One of the first steps, being the intensification estimate, required the determination of the future intensification by dwelling type. Historical shares of intensification dwellings by type was then used as the basis of an assumption for future shares. Figure 22 shows the past 10-year intensification shares of private dwelling types.

Figure 22 Intensification Shares of Private Dwellings by Type

Mid-year	Single-detached	Semi-detached	Rowhouse	Apartment	Total
2009-2010	11%	7%	11%	71%	100.0%
2010-2011	8%	6%	9%	77%	100.0%
2011-2012	10%	6%	4%	81%	100.0%
2012-2013	7%	7%	3%	84%	100.0%
2013-2014	6%	6%	3%	84%	100.0%
2014-2015	6%	4%	2%	87%	100.0%
2015-2016	8%	6%	2%	84%	100.0%
2016-2017	10%	6%	6%	78%	100.0%
2017-2018	7%	7%	4%	81%	100.0%
2018-2019	7%	4%	6%	83%	100.0%
10-year avg	8%	6%	5%	81%	100.0%
5-year avg	7%	6%	4%	83%	100.0%

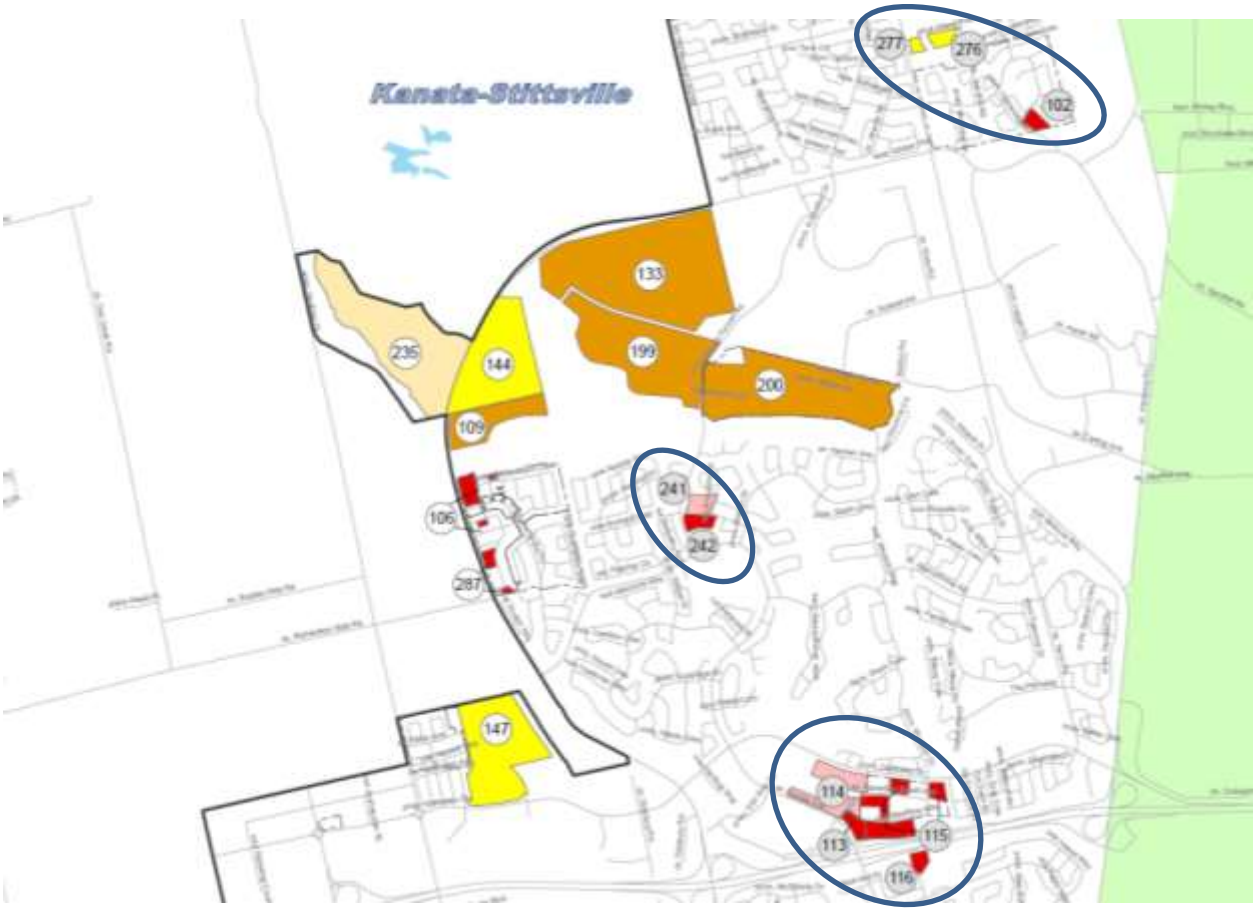
The comparison of the 10-year and five-year averages may form the basis of an assumption that apartment shares will increase in the future as opportunities for lower density units decline but the shares by type would be relatively close to the historical averages. However, this approach heavily relies on past trends to be representative of future shares, which can be particularly difficult to estimate for intensification due to many unknown influencing factors.

Rather than start with the least amount of information for assessing urban supply, an alternate approach would be to start with the most information, which is the greenfield supply. The amount of vacant greenfield area is reported annually through the VURLS and is a comprehensive assessment of registered plans, development applications, and secondary plans. The 2018 survey was used as the basis to estimate the vacant greenfield areas to accommodate future growth for the new Official Plan and then was updated by adding back the housing starts that occurred between July 1 and December 31, 2018, the units under construction on June 30, 2018 as reported by CMHC, and the addition of a development parcel in South Nepean based on Official Plan Amendment #212 and approvals from the Rideau Valley Conservation Authority (identified as South Nepean parcel number “Caivan (301)” in Appendix 2). The updated vacant non-intensification greenfield area as of July 1, 2018 is estimated to be able to accommodate about 83,300 dwelling units, of which 59,700 (about 72 per cent) are anticipated to be in the form of single-detached, semi-detached, or rowhouse type dwellings, on over 2,000 net residential hectares, further detailed in Appendix 2.

This update of the 2018 VURLS establishes a “built boundary” where VURLS parcels correspond to the existing vacant greenfield area as illustrated in Figures 3, 4 and 7. In a similar manner to the built boundary for the Greater Golden Horseshoe, intensification parcels identified in this update that are

surrounded by existing development are considered part of the built-up area and any development on these parcels after July 1, 2018 would be considered as intensification. Figure 23 shows an excerpt of the 2018 VURLS parcels in Kanata-Stittsville where the 'grey' number labels indicate intensification parcels (277, 276, 102, 241, 242, 114, 113, 115, 116) by virtue of being vacant and surrounded by development within at least the past four years and are hence considered within the built-up area. The remaining non-intensification units are considered greenfield for the purposes of growth management.

Figure 23 Example 2018 VURLS Built-up Area Parcels, Excerpt of 2018 VURLS Kanata-Stittsville Map



In addition, the relevant supply are those units that would reasonably be built and occupied by 2046, known as "absorption." Even though there is more supply than 52,200 apartments throughout the urban area, the projected number of urban apartments is the amount expected to be absorbed by 2046. About 10 per cent (6,600 units) of greenfield units are estimated to be developed as apartments. Figure 24 shows the existing urban vacant/greenfield ground-oriented supply with 10 per cent of urban apartments that will be absorbed by 2046 subtracted from the urban demand from Figure 21. To be consistent with the definitions used to define an apartment within housing projections, stacked rowhouse units are considered as apartment units.

Figure 24 Existing Urban Greenfield Supply by Dwelling Type

	Single-Detached	Semi-Detached	Rowhouse	Apartments	Total
Urban Demand	54,600	6,200	68,900	52,200	181,800
less Existing Greenfield	27,900	1,400	30,400	6,600	66,300
Remaining Urban	26,600	4,800	38,500	45,500	115,500

* Units may not add to totals due to rounding.

The remaining 115,500 dwelling units, of which 69,900 (61 per cent) are ground-oriented dwellings, need to be accommodated either through intensification within the built-up area or a combination of intensification and urban expansion for additional greenfield area.

Resale Housing Supply Caveat

The resale housing market is another source of supply that absorbs housing demand within the built-up area. However, it has not been possible to assemble the necessary data to include an estimation of how the resale housing market acts as existing and potential supply to 2046. Data from the Greater Ottawa Real Estate Board is provided for a market that is larger than the Ottawa municipal boundary and dwelling unit sales are not classified within the same four general categories of single-detached, semi-detached, rowhouse, and apartment in the housing projections. It is also not known what proportion of sellers leave the Ottawa private housing market and what proportion stays with the intention of purchasing another house and competing with new population that moves to Ottawa. Although this information is lacking, the presence of the resale market and the fact that new movers to Ottawa do purchase resale units, is a caveat that the required supply of 115,500 dwelling units likely over represents the actual private market housing needs to 2046.

Section 7: Growth Scenarios

The Official Plan review examines three residential growth management scenarios to accommodate the remaining 115,500 dwelling units. A key policy direction for the new Official Plan is that more growth should occur through intensification within the urban area and serviced villages. The scenarios represent three growth management models: “Status Quo”, “No Expansion”, and “Balanced”. The Status Quo scenario examines a scenario that does not meet the policy direction to achieve most of the growth through intensification and assumes a continuation of the current Official Plan incremental intensification rate. The No Expansion and Balanced scenarios offer two ways to achieve the above policy direction. The intensification rate over the growth period, and assumed dwelling mix for greenfield expansion, if any, are the main assumptions for considering how to manage the required urban growth. References to built-up and greenfield areas correspond to the concepts in Section 3.

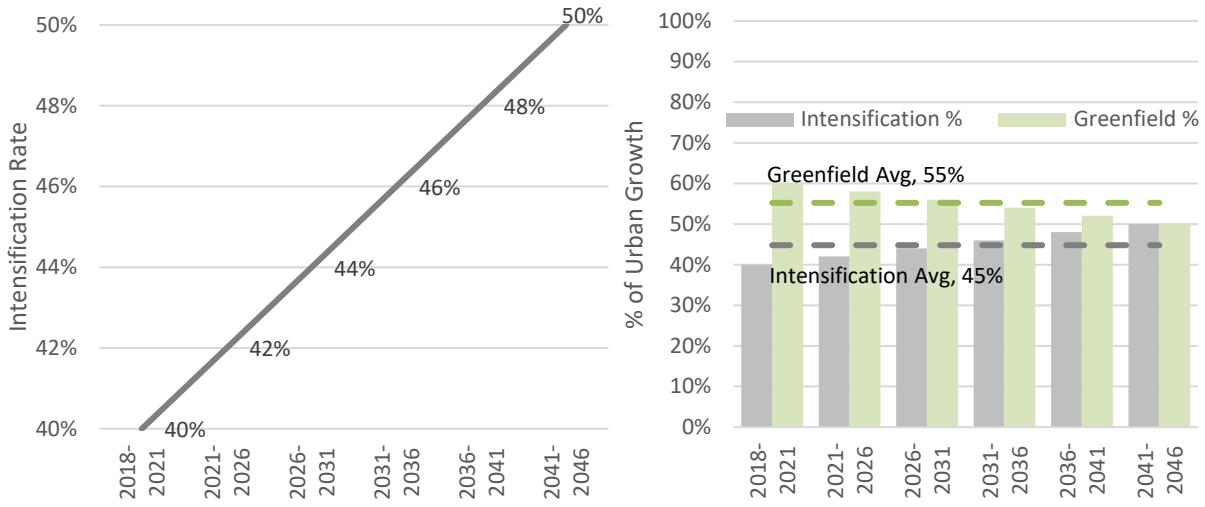
Status Quo Scenario

The Status Quo scenario receives its label by maintaining the current Official Plan incremental intensification targets, as detailed in Section 5 Intensification, reaching 50 per cent by 2046. From 2018 to 2046 this means that 45 per cent of growth will occur through intensification and 55 per cent through greenfield development. Figure 25 illustrates how intensification rates would gradually increase to 2046 for the Status Quo scenario, including the required split between intensification and greenfield development throughout each five-year period, based on the housing growth projections.

Figure 25 Status Quo Intensification Targets and Share of Urban Growth to 2046

Timeframe	Urban Units	Intensification %	Built-up Area Units	Greenfield %	Greenfield Units
2018-2021	24,300	40%	9,700	60%	14,600
2021-2026	38,800	42%	16,300	58%	22,500
2026-2031	35,800	44%	15,800	56%	20,100
2031-2036	31,200	46%	14,300	54%	16,800
2036-2041	27,400	48%	13,100	52%	14,200
2041-2046	24,300	50%	12,200	50%	12,200
2018-2046	181,800	**45%**	81,400	**55%**	100,400

* Units may not add to totals due to rounding.



Based on the above growth proportions, where 45 per cent occurs within the built-up area through intensification and 55 per cent occurs through greenfield development, Figure 26 shows the Status Quo urban area growth allocation.

Figure 26 Status Quo Urban Built-up Area and Greenfield Allocation

Area	Total Dwellings
Urban Demand	181,800
Urban Allocation	181,800
55% in Total Greenfield	100,400
45% in Built-up Area	81,400

For the greenfield portion of growth, development will occur in two areas, the existing greenfield/vacant areas and on expansion greenfield lands for any balance. Figure 27 shows the greenfield units divided into these two areas by subtracting the supply of existing greenfield units in Figure 24 from the "55% in Total Greenfield" allocation in Figure 28.

Figure 27 Status Quo Greenfield Allocation, Total Dwellings

Area	Total Dwellings
55% in Total Greenfield	100,400
less Existing Greenfield total	66,300
Expansion Greenfield total	34,000

* Figures are rounded and may not add to totals

The specific dwelling types within the existing greenfield/vacant areas are based on annual monitoring through the VURLS report. Parcels within this survey that are not part of a secondary planning process such as a CDP or planning application that determines the proposed number of dwellings and the shares by type, are assigned density and dwelling type proportions based on built and current applications within each of the suburban CDP areas. Further details are provided in Appendix 2, page 11. These proportions are summarized in Figure 28 and are a reasonable estimate until more information is provided as part of a secondary planning exercise or development application.

Figure 28 Greenfield Dwelling Type Share Assumptions

	Single-Detached	Semi-Detached	Rowhouse	Apartment	Total
Dwelling Share	42%	3%	43%	12%	100%

Figure 29 distributes the greenfield total of 100,400 units to the existing and expansion greenfield areas, using the "Existing Greenfield total" and "Expansion Greenfield total" from Figure 27, and multiplying the dwelling share in Figure 28 by the "Expansion Greenfield total" to estimate the number dwelling types for the remaining expansion greenfield.

Figure 29 Status Quo Greenfield Allocation

Area	Single-Detached	Semi-Detached	Rowhouse	Apartment	Total
55% in Total Greenfield					100,400
less Existing Greenfield total					66,300
Expansion Greenfield total					34,000
Greenfield dwelling %	42%	3%	43%	12%	100%
Estimated Expansion types	14,300	1,000	14,600	4,100	34,000
plus Existing Greenfield types	27,900	1,400	30,400	6,600	66,300
Total Greenfield types	42,200	2,400	45,000	10,700	100,400
Total Greenfield %	42%	2%	45%	11%	100%

* Figures are rounded and may not add to totals

After the total greenfield growth has been determined, the remainder is to be accommodated in the built-up area by subtracting the total greenfield from the urban demand in Figure 21, as shown in Figure 30.

Figure 30 Status Quo Built-up Area Allocation

Area	Single-Detached	Semi-Detached	Rowhouse	Apartment	Total
Urban Demand	54,600	6,200	68,900	52,200	181,800
Urban Supply Allocation					181,800
less 55% in Total Greenfield	42,200	2,400	45,000	10,700	100,400
45% in Built-up Area	12,300	3,800	23,900	41,500	81,400

* Figures are rounded and may not add to totals

The Status Quo scenario requires 81,400 dwelling units to be accommodated within the built-up area. Of this amount, 40,000 units (49 per cent) are to be ground-oriented dwellings and/or comparable housing such as 613 Flats. A combination of existing secondary plans, CDPs, and transit-oriented development plans, future master plans such as at LeBreton Flats or Tunney's Pasture, site specific applications for condominium or rental apartments and stacked rowhouses, and small-scale infill within existing residential neighbourhoods are needed to accommodate this supply.

The Status Quo scenario requires an urban area expansion to accommodate approximately 34,000 dwelling units, of which 29,900 (88 per cent) are ground oriented. To estimate the number of net residential hectares required for these dwelling units, assumptions for residential densities by dwelling type are applied. The assumed densities are based on the previous 5-year weighted average of built densities from the latest VURLS report.[7] Figure 31 summarizes the densities by dwelling type and divides them by the number of estimated expansion dwellings by type in Figure 28. The apartment densities are an average of constructed stacked rowhouse and apartment units.

Figure 31 Built Greenfield Densities by Dwelling Type, 5-year weighted Average

Units per Net Hectare	Single-Detached	Semi-Detached	Rowhouse	Apartment	Total
Built Density	25.0	35.6	50.6	92.4	37.1
Estimated Expansion	14,300	1,000	14,600	4,100	34,000
Net residential hectares	572	29	289	44	934

* Figures are rounded and may not add to totals

In addition to residential uses, there are many other uses that form a community including parks, schools, community centres, commercial services, public streets, pathways, stormwater management facilities, and other neighbourhood level uses. Converting the net residential hectares to gross community hectares requires adding the gross of all the other uses to the estimated residential hectares. An analysis of residential net to gross ratios was conducted that examined three different types of suburban areas at different stages of development and determined that residential uses account for 50 per cent of the larger communities that they are within. This analysis is provided in Appendix 4. Figure 32 applies this 50 per cent ratio to determine the number of gross hectares that are required for urban expansion in the Status Quo scenario.

[7] 2019, City of Ottawa. *Vacant Urban Residential Land Survey, 2018 update.* Appendix Table 4, page 9. https://ottawa.ca/en/city-hall/get-know-your-city/statistics-and-economic-profile/statistics/land-surveys-and-research-reports/vacant-urban-residential-land-survey#2018-update

Figure 32 Estimated Gross Hectares for Status Quo Urban Expansion

Units per Net Hectare	Single-Detached	Semi-Detached	Rowhouse	Apartment	Total
Built Density	25.0	35.6	50.6	92.4	37.1
Estimated Expansion	14,300	1,000	14,600	4,100	34,000
Net residential hectares	572	29	289	44	934
Net to Gross Ratio					50%
Gross expansion hectares					1,868

* Figures are rounded and may not add to totals

The Status Quo scenario requires approximately 1,868 gross hectares of urban area expansion to accommodate the resulting 34,000 dwelling unit shortfall on greenfield lands that results from the assumed intensification rates and greenfield dwelling shares in this scenario. Figure 33 summarizes the built-up area, greenfield, and expansion components of the Status Quo scenario.

Figure 33 Summary of Status Quo Scenario

Area	Single-Detached	Semi-Detached	Rowhouse	Apartment	Total
City-wide Demand	66,100	6,400	69,700	52,600	194,800
Rural Demand	11,500	200	900	400	13,000
Urban Demand	54,600	6,200	68,900	52,200	181,800
45% Built-up Area	12,300	3,800	23,900	41,500	81,400
55% Total Greenfield	42,200	2,400	45,000	10,700	100,400
Existing greenfield	27,900	1,400	30,400	6,600	66,300
Expansion greenfield	14,300	1,000	14,600	4,100	34,000
Density units per hectare	25.0	35.6	50.6	92.4	37.1
Net residential hectares	572	29	289	44	934
Net to Gross Ratio					50%
Gross expansion hectares					1,868

* Figures are rounded and may not add to totals

Similar to the No Expansion scenario, the new Official Plan would also need to review how the required 81,400 intensification units will be implemented through policy and zoning. In addition, the City will need to conduct a review of water, wastewater and stormwater infrastructure, including any upgrades that might be necessary for capacity within the built-up area, and how any required upgrades will be financed and implemented.

The Status Quo scenario however does not achieve many of the new Official Plan policy directions. Most of the growth in this scenario would occur through greenfield areas and less growth would be concentrated around the current and planned rapid transit system as the additional urban expansion area is further away from the planned transit network. The lower requirement for intensification also leads to less households and people around the transit network and the nodes-and-corridors concept within the built-up area, leading to less growth within 15-minute walkable neighbourhoods.

No Expansion Scenario

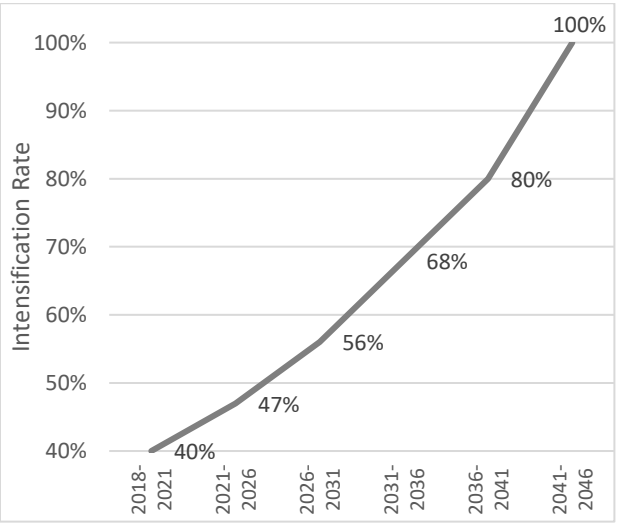
In a No Expansion scenario the policy intervention for consideration is no further expansion of the urban area. This scenario represents the greatest extent to which growth management can contribute to achieving policy directions where most growth occurs through intensification, growth uses existing infrastructure most efficiently, and GHG emission reductions are maximized. Any development that cannot be accommodated within the existing urban vacant/greenfield area is to be accommodated solely within the built-up area through intensification. This scenario would require the intensification rate to increase from 40 per cent currently to 100 per cent by 2046.

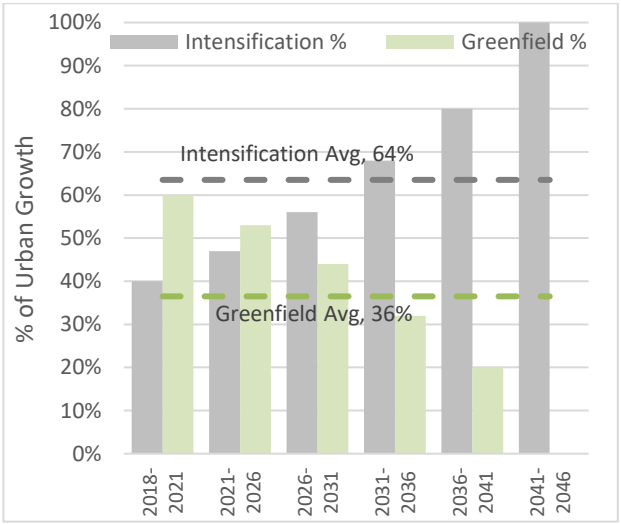
Figure 34 illustrates how intensification rates would increase to 2046 for the No Expansion scenario, including the required split between built-up area and greenfield development throughout each five-year period, based on the housing growth projections in Figure 2. Not achieving the intensification rates in the short- or mid-term horizons will put additional pressure for consumers and the building industry to require larger annual increases later in the horizon to make up for the shortfall.

Figure 34 No Expansion Intensification Targets and Share of Urban Growth to 2046

Timeframe	Urban Units	Intensification %	Built-up Area Units	Greenfield %	Greenfield Units
2018-2021	24,300	40%	9,700	60%	14,600
2021-2026	38,800	47%	18,200	53%	20,600
2026-2031	35,800	56%	20,100	44%	15,800
2031-2036	31,200	68%	21,200	32%	10,000
2036-2041	27,400	80%	21,900	20%	5,500
2041-2046	24,300	100%	24,300	0%	-
2018-2046	181,800	**64%**	115,500	**36%**	66,300

* Units may not add to totals due to rounding.





The recommended gradual increase in intensification results in 64 per cent of growth occurring within the built-up area in the No Expansion scenario. This growth allocation translates into 115,500 units, of which, 69,900 (61 per cent) need to be ground-oriented units or units that would otherwise offer comparable housing to a ground-oriented dwelling, as shown in Figure 35.

Figure 35 No Expansion Urban Area Allocation

	Single-Detached	Semi-Detached	Rowhouse	Apartments	Total
City-wide Demand	66,100	6,400	69,700	52,600	194,800
Rural Demand	11,500	200	900	400	13,000
Urban Demand	54,600	6,200	68,900	52,200	181,800
less Existing Greenfield	27,900	1,400	30,400	6,600	66,300
Remaining in Built-up Area	26,600	4,800	38,500	45,500	115,500

* Units may not add to totals due to rounding.

The allocation requirement of 115,500 dwelling units within the built-up area by 2046 is a significant amount of growth for the following reasons:

1. Intensification in the last 20 years has mostly been comprised of apartments and while Ottawa has experienced success in increasing intensification rates, the required intensification rates are much higher;
2. Intensification must include the entirety of 69,900 ground-oriented units to accommodate the projected types of households;
3. The city currently does not have the zoning in place to provide for the necessary as-of-right permissions to achieve the types of dwellings to accommodate the projected growth within the existing built-up area;
4. The City must evaluate its water, wastewater, and stormwater infrastructure to confirm that it can accommodate significant additional growth through intensification; and,
5. The home-building industry should be given time to adapt, develop new forms of dwellings, such as 613 Flats, assemble land and develop strategies to put these new types of units on the market.

The No Expansion scenario is an extremely ambitious and unlikely scenario. Although it meets the Official Plan growth management policy direction of achieving the majority growth through intensification the scenario is too ambitious within the time period of the new Official Plan to accommodate the number of necessary ground-oriented dwellings through intensification. Since there are no longer many non-federal vacant land agglomerations within the Greenbelt, and many major mall sites already have redevelopment plans, much of this intensification will need to come from continued redevelopment along main streets and gentle ground-oriented intensification in existing lower density neighbourhoods. Ottawa does not have a significant inventory of idle or underused industrial sites that can be repurposed due to the nature of our economy.

This scenario requires family-sized housing in high rise buildings that are not being built today in Ottawa, and which if built will be more expensive due to the costs of high-rise construction when not provided or subsidized by a public agency. The No Expansion scenario has an inherent risk: there will be an inadequate supply of housing if the required complete housing range of additional intensification is not achieved. This shortfall could occur if the home-building industry is not able to bring new products to the market quickly enough, or in enough quantities, or if the City is unable to implement the necessary zoning permissions in a timely manner. A healthy housing supply provides choices for households rather than limiting options.

Our current urban pattern has evolved over three generations through incremental and gradual changes. People have multiple preferences that factor into their housing choices, and even at comparable prices people have different preferences, such as the amount of floor area, location, or private outdoor amenity space. Although the policy direction is to have most of the growth through intensification, relying on new products, such as 613 Flats or other similar concepts to increase ground-oriented intensification, to accommodate the majority of intensification also represents an absorption risk. The No Expansion scenario assumes that a significant number of households will choose, or be able to obtain, these new housing products over traditional dwelling units within 25 years.

This will price many people out of home ownership. They will likely remain in the rental market longer until they can afford larger down payments and monthly payments. This will exacerbate Ottawa's already low vacancy rates in the rental market and price out even lower income earners from affordable rental accommodations without unprecedented public interventions in the Ottawa rental housing market.

Achieving a significant change in the provision and adoption of new dwelling types to reach a "no-expansion state" will require longer than the timeframe of the new Official Plan. The five-year average from 2006 to 2010 was the lowest intensification rate observed at 31 per cent and since that time intensification increased eight points to 39 percent. In comparison the No Expansion scenario increases intensification by 7, 9, 12, 12, and 20 points every five-years to 2046, and this assumes that any required infrastructure upgrades are in place by that timeframe.

A comparison with other intensification rate targets will provide context for the aggressive intensification rate required in the No Expansion scenario. *A Place to Grow*[8] is the Ontario government's updated initiative to plan for growth and development with the goals of supporting economic prosperity, protecting the environment, and helping communities of achieving a high quality of life. The growth management policies focus growth within settlement areas, which in Ottawa's context is the urban area and the villages, and the achievement of complete communities that have diverse land uses, improve overall quality of life, mitigate climate change impacts and offer a diverse range and mix of housing options, convenient access to services, and compact built form.

Within the settlement areas of regions inside the Greater Toronto greenbelt and the cities located outside of the greenbelt, 50 per cent of all residential development will occur annually within the delineated built-up area, which in Ottawa's context is referred to as intensification. For the counties located outside of the greenbelt there are no minimum intensification requirements. In comparison, a 100 per cent intensification rate by 2046 is an overly ambitious scenario considering that *A Place to Grow* targets 50 per cent by 2031 and thereafter, while aiming to achieve many of the same objectives as the new Official Plan. An increase to 100 per cent intensification by 2046 is also a significant change when comparing to Ottawa's historical achieved intensification rates of 51 and 47 per cent respectively for total and private dwellings.

Although it meets the Official Plan growth management policy direction of achieving the majority growth through intensification and gradually increasing our intensification rates and represents the most economical scenario from a transit perspective, the No Expansion scenario is too ambitious within the time period of this Official Plan to accommodate the number of ground-oriented dwellings needed through intensification. The No Expansion scenario has an inherent risk where if the required additional intensification is not achieved, there will be an inadequate supply of housing to accommodate the projected population.

While research has shown that adding land or not regulating growth does not make housing more affordable, there is a risk that not providing an adequate land supply will deteriorate the amount and range of housing availability in the city and adversely affect affordability. Adding supply does not reduce the "floor" of land prices, but rapidly exhausting supply will likely drive prices up. Easy intensification sites will be used up quickly so the lag between market transformation to a new profile of demand and availability of units will cause prices to go up. This scenario depends on a very rapid transformation of the housing mix and a very rapid switch to more compact forms, rising substantially over each five-year period. Since the rate of change must grow to make the target possible, at the same time when the availability of easy intensification sites diminishes, the odds of achieving the targets become increasingly low over each subsequent five-year period. If Ottawa loses its relatively moderate housing prices, this will start to have an adverse effect overall local economy since affordability is one of our current competitive advantages when attracting businesses or talent. Staff consider this type of ambitious scenario to be premature currently. Such a scenario would be more feasible when higher intensification rates are achieved.

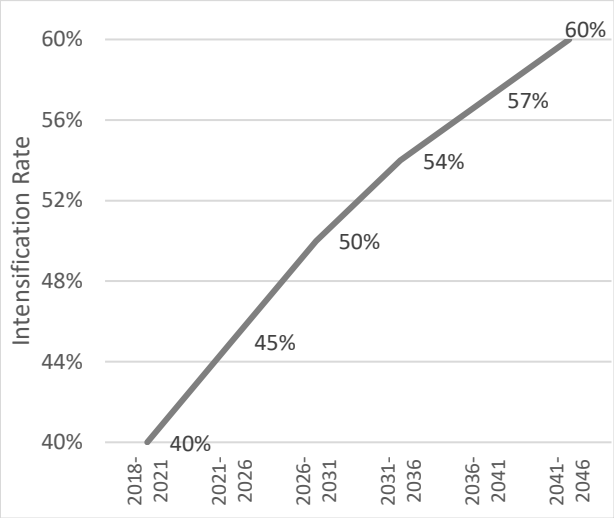
[8] 2019, Ontario Ministry of Municipal Affairs and Housing. *A Place to Grow: Growth Plan for the Greater Golden Horseshoe.* https://www.ontario.ca/document/place-grow-growth-plan-greater-golden-horseshoe

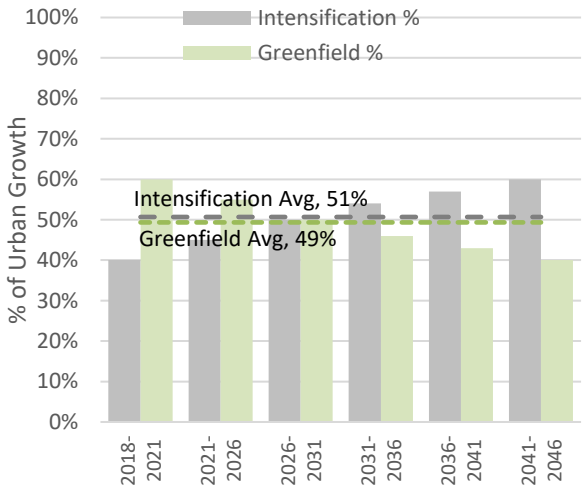
Balanced Scenario

The Balanced scenario is a balanced approach between the other two scenarios, where intensification increases to 60 per cent by 2046. This scenario applies a more realistic approach to achieving policy directions for increased intensification, locating growth to use existing infrastructure efficiently, and GHG emission reductions, while also balancing housing options. Moreover, intensification rates are expected to increase more during the short and medium terms as LRT Stage 2 enters service and projects are completed around the rapid transit line. Figure 36 illustrates how intensification rates gradually increase to 2046 under the Balanced scenario when applied to the housing growth projections.

Figure 36 Balanced Intensification Targets and Share of Urban Growth to 2046

Timeframe	Urban Units	Intensification %	Built-up Area Units	Greenfield %	Greenfield Units
2018-2021	24,300	40%	9,700	60%	14,600
2021-2026	38,800	45%	17,500	55%	21,300
2026-2031	35,800	50%	17,900	50%	17,900
2031-2036	31,200	54%	16,800	46%	14,300
2036-2041	27,400	57%	15,600	43%	11,800
2041-2046	24,300	60%	14,600	40%	9,700
2018-2046	181,800	**51%**	92,100	**49%**	89,700





The intensification rate increase in the Balanced scenario means that, over the course of the planning period to 2046, 51 per cent of all urban growth is accommodated in the built-up area through intensification, and 49 per cent through greenfield development. This is an ambitious but realistic target in comparison to the 50 per cent intensification target by 2031 that applies to the Greater Golden Horseshoe under *A Place to Grow*. Figure 37 summarizes the urban area growth allocation based on these intensification and greenfield proportions.

Figure 37 Balanced Urban Built-up Area and Greenfield Allocation

Area	Total Dwellings
Urban Demand	181,800
Urban Supply Allocation	181,800
49% in Total Greenfield	89,700
51% in Built-up Area	92,100

The Balanced scenario requires the total greenfield area to accommodate 89,700 dwelling units. This greenfield growth is further divided into two areas, the existing greenfield areas, and urban area

expansion lands for any balance. Figure 38 shows the greenfield units divided into these two areas by subtracting the supply of existing greenfield units in Figure 24 from the "49% in Total Greenfield" allocation in Figure 37.

Figure 38 Balanced Greenfield Allocation, Total Dwellings

Area	Total Dwellings
49% in Total Greenfield	89,700
less Existing Greenfield total	66,300
Expansion Greenfield total	23,300

* Figures are rounded and may not add to totals

The Balanced scenario will require an urban area expansion to accommodate the remaining 23,300 greenfield dwelling units. The dwelling type shares in Figure 28 are used to multiply the difference from the "49% in Total Greenfield" and "Existing Greenfield total", providing an estimate on the number of dwellings by type on expansion lands as shown in Figure 39. The same share is used because they represent the most reasonable assumptions for estimating dwelling unit types regardless of scenario.

Figure 39 Balanced Greenfield Allocation

Area	Single-Detached	Semi-Detached	Rowhouse	Apartment	Total
49% in Total Greenfield					89,700
less Existing Greenfield total					66,300
Expansion Greenfield total					23,300
Greenfield dwelling %	42%	3%	43%	12%	100%
Estimated Expansion types	9,800	700	10,000	2,800	23,300
plus Existing types	27,900	1,400	30,400	6,600	66,300
Total Greenfield types	37,700	2,100	40,400	9,400	89,700
Total Greenfield %	42%	2%	45%	10%	100%

* Figures are rounded and may not add to totals

After the total greenfield growth has been determined, the built-up area will accommodate the remaining units by subtracting the "51% in Greenfield" from the "Urban Demand" as shown in Figure 40.

Figure 40 Balanced Built-up Area Allocation

Area	Single-Detached	Semi-Detached	Rowhouse	Apartment	Total
Urban Demand	54,600	6,200	68,900	52,200	181,800
Urban Supply Allocation					181,800
less 49% in Total Greenfield	37,700	2,100	40,400	9,400	89,700
51% in Built-up Area	16,800	4,100	28,500	42,700	92,100

* Figures are rounded and may not add to totals

The Balanced scenario requires the built-up area to accommodate 92,100 dwellings through intensification. Of this amount, 49,400 units (54 per cent) units are required to be ground-oriented dwelling units and/or comparable housing such as 613 Flats. This supply will come from a variety of sources, including existing secondary plans, CDPs, and transit-oriented development plans, future master plans such as at LeBreton Flats or Tunney's Pasture, redevelopment of aging retail shopping centres (such as Westgate, Elmvale Acres, Lincoln Fields), site specific applications for condominium or rental apartments and stacked rowhouses, and small-scale infill within existing residential neighbourhoods. 613 Flats within existing neighbourhoods are required to achieve this level of intensification, although not to the same extent as under the No Expansion scenario.

The Balanced scenario requires an urban area expansion to accommodate approximately 23,300 dwelling units on greenfield areas, of which 20,500 units (88 per cent) are ground oriented. To estimate

the number of net residential hectares of urban expansion lands required for these dwelling units, the same assumptions from the Status Quo scenario are applied for dwelling type densities, as referenced from the latest VURLS report. Likewise, the same ratio to convert net residential hectares to gross community hectares from the Status Quo scenario, and as further detailed in Appendix 4, is applied in the Balanced scenario. Figure 41 summarizes the application of these densities to the required expansion units to determine the net residential hectares.

Figure 41 Built Greenfield Densities by Dwelling Type, 5-year Weighted Average

Units per Net Hectare	Single-Detached	Semi-Detached	Rowhouse	Apartment	Total
Built Density	25.0	35.6	50.6	92.4	37.1
Estimated Expansion	9,800	700	10,000	2,800	23,300
Net residential hectares	392	20	198	30	640
Net to Gross Ratio					50%
Gross expansion hectares					1,281

* Figures are rounded and may not add to totals

The Balanced scenario requires approximately 1,281 gross hectares of urban area expansion to accommodate the resulting 23,300 dwelling unit shortfall on greenfield lands that results from the assumed intensification rates and greenfield dwelling shares in this scenario. This represents a 30 per cent reduction of the urban area expansion required in the Status Quo scenario. Figure 42 summarizes the intensification, greenfield, and expansion components of the Balanced scenario.

Figure 42 Summary of Balanced Scenario

Area	Single-Detached	Semi-Detached	Rowhouse	Apartment	Total
City-wide Demand	66,100	6,400	69,700	52,600	194,800
Rural Demand	11,500	200	900	400	13,000
Urban Demand	54,600	6,200	68,900	52,200	181,800
51% Built-up Area	16,800	4,100	28,500	42,700	92,100
49% Total Greenfield	37,700	2,100	40,400	9,400	89,700
Existing greenfield	27,900	1,400	30,400	6,600	66,300
Expansion greenfield	9,800	700	10,000	2,800	23,300
Density units per hectare	25.0	35.6	50.6	92.4	37.1
Net residential hectares	392	20	198	30	640
Net to Gross Ratio					50%
Gross expansion hectares					1,281

* Figures are rounded and may not add to totals

Similar to the other scenarios, the new Official Plan would also need to review the implementation of the required 92,100 intensification units within the built-up area. Unlike the No Expansion scenario, the risk on achieving this level of intensification is less severe, with more time to see how many households would shift to new housing options, such as 613 Flats, within 15-minute neighbourhoods. Relative to the No Expansion scenario, the Balanced scenario provides more time to assess the infrastructure needs for this amount of intensification and to finance and implement any needed upgrades.

Summary of Scenarios

Figure 43 summarizes the growth components of the three growth scenarios, beginning with the total urban allocations between intensification and greenfield, and then dwelling units in existing greenfield, expansion greenfield and total intensification.

Figure 43 Summary of Scenario Growth Components

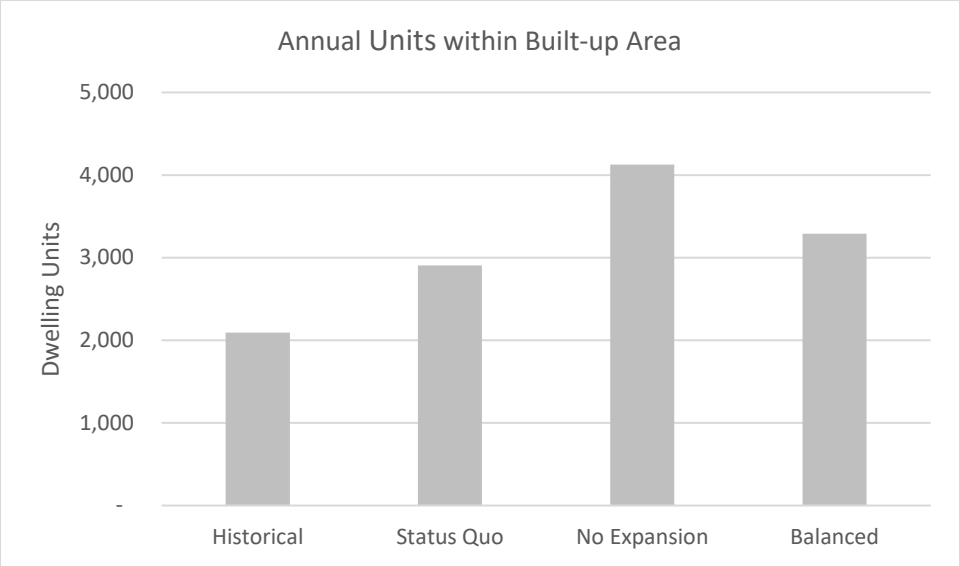
Growth Component	Status Quo	No Expansion	Balanced
Intensification % of Growth	45%	64%	54%
Greenfield % of Growth	55%	36%	46%
Existing Greenfield % of Growth	36%	36%	36%
Expansion Greenfield % of Growth	19%	0%	10%
Total Built-up Area Units	81,400	115,500	92,100
Ground-oriented	40,000	69,900	49,400
Apartment	41,500	45,500	42,700
Total Greenfield Units	100,400	66,300	89,700
Ground-oriented	89,700	59,700	80,200
Apartment	10,700	6,600	9,400
Existing Greenfield Units	66,300	66,300	66,300
Ground-oriented	59,700	59,700	59,700
Apartment	6,600	6,600	6,600
Net residential hectares	2,006	2,006	2,006
Expansion Greenfield Units	34,000	-	23,300
Ground-oriented	29,900	-	20,500
Apartment	4,100	-	2,800
Net residential hectares	934	-	640
Gross community hectares	1,868	-	1,281
Total Greenfield net hectares	2,940	2,006	2,646
Existing net hectares	2,006	2,006	2,006
Expansion net hectares	934	-	640

* Figures are rounded and may not add to totals

The No Expansion and Balanced scenarios shift housing from greenfield lands to the built-up area to different degrees in order to better align with policy objectives for growth and climate change. The No Expansion scenario shifts 34,000 dwellings while the Balanced scenario shifts 10,700 dwellings, of which 9,400 (88 per cent) are ground oriented. On a percentage basis the No Expansion scenario shifts 51 per cent of greenfield growth in the Status Quo scenario to the built-up area, while the Balanced scenario shits 12 per cent.

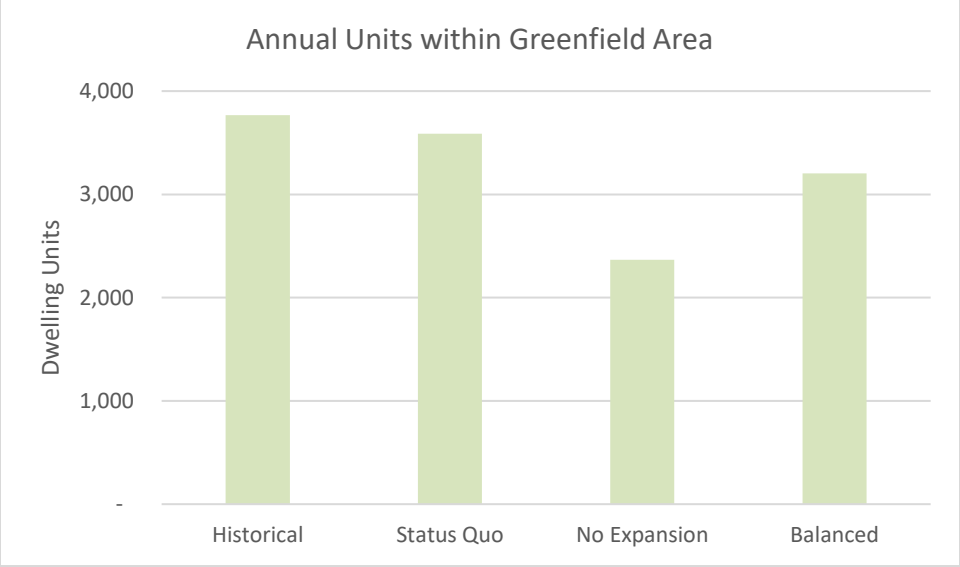
On an annual basis, all growth scenarios allocate more growth within the built-up area than has been built historically. This is expected due to the higher intensification rates in all scenarios than experienced historically. Figure 44 compares the units developed historically, about 2,100 units annually, within the built-up area to each of the growth scenarios. The No Expansion scenario requires over 4,100 units annually, which is almost double the number of units that is typically developed annually within the built-up area, while the Status Quo and Balanced scenarios require an increase of about 800 and 1,200 units respectively within the built-up area on an annual basis.

Figure 44 Comparison of Growth Scenarios within the Built-up Area



Within the greenfield areas, all growth scenarios allocate less growth than has been built historically on an annual basis, although the differences are less pronounced than within the built-up area due to the existing vacant greenfield supply that absorbs most of the projected greenfield growth. Figure 45 compares the units developed historically, being about 3,800 annually within the greenfield area, to each of the growth scenarios on an annual basis. The No Expansion scenario sees a reduction of 1,400 units annually compared to historical, while the Status Quo and Balanced scenarios see a decrease of less than 200 and 600 units respectively on an annual basis.

Figure 45 Comparison of Growth Scenarios within the Greenfield Area



To accommodate greenfield residential growth, the No Expansion scenario only utilizes the existing greenfield supply of just over 2,000 net hectares. The Status Quo scenario requires 2,940 net hectares, which includes 934 net hectares of urban expansion, while the Balanced scenario requires 2,646 net hectares, which includes 640 net hectares of urban expansion.

Recommendation: Balanced Scenario

The Balanced scenario is the recommended growth management approach for the new Official Plan. It will best meet the new Official Plan policy directions and is the most consistent with the entirety of the PPS. As summarized in Section 1, the growth management directions focus on having most of the growth occur through intensification, building the city around its rapid transit system, and ensuring that infrastructure and climate change considerations are included as part of the growth management strategy. The Balanced scenario increases private market housing options, allocating growth to efficiently use existing and committed infrastructure such as rapid transit, resulting in fewer GHG emissions.

Increasing Housing Options

The Balanced scenario shifts 9,400 ground-oriented and 1,300 apartments from the greenfield area in the Status Quo scenario to the built-up area. This shift will help increase housing options geographically within the city. Historically, apartment units have made up the majority of new units within the built-up area. The current private dwelling intensification composition that is made up primarily of one- and two-bedroom apartments is not an alternative for those households that need the extra space for growing families. More diversity of new dwellings by size within the built-up area will increase housing options throughout the urban area and provide a greater mix of housing geographically.

The Balanced scenario also considers the type of growth that occurs within the built-up and greenfield areas as part of an appropriate range of housing mix and choice. Reviewing where housing has developed provides a snapshot of the current growth management strategy of relying on a single intensification target, rather than addressing a more complete mix that is more equitably distributed. Figure 46 shows the distribution of dwelling types throughout the urban area based on building permits for private household dwellings.

Figure 46 Geographical Distribution of Private Dwellings by Type, 2008 to 2018

% of Urban	Single-detached	Semi-detached	Rowhouse	Ground-oriented	Apartment
Inner Urban	9%	49%	6%	11%	73%
Outer Urban	6%	9%	8%	7%	13%
Greenfield	85%	43%	86%	82%	14%
Urban	100%	100%	100%	100%	100%

Over the past 10-years, 82 per cent of new ground-oriented units such as single-detached, semi-detached, and rowhouses have concentrated at the edge of the urban area on greenfield lands. Conversely 73 per cent of condominium or rental apartments have been concentrated within the inner urban area. As demonstrated in Section 5 Intensification, because intensification within the built-up area is mostly comprised of apartment units, a growth management approach that relies singularly on an intensification rate does not equitably distribute housing. Housing choice has been limited within different parts of the urban area and simply relying on an intensification rate to distribute the housing projections does not provide for an appropriate range and mix of housing throughout the urban area.

The urban demand in Figure 21 show that ground-oriented housing accounts for over 70 per cent of the housing growth. As shown in Figure 46, traditionally most ground oriented units would be built in suburban locations resulting in low supply to accommodate demand within other urban areas. The Balanced scenario provides an approach to provide more housing choice for ground-oriented dwellings within the built-up area through intensification. Additional intensification opportunities through new forms of housing such as 613 Flats within 15-minute walkable neighbourhoods around transit, weekly, and daily services will provide for a more appropriate range and mix of housing than relying on market forces to distribute dwelling types geographically.

In conjunction, 49 per cent of growth is to occur on both existing greenfield and urban expansion lands. Existing greenfield lands will accommodate 36 per cent of the urban growth, even in a No Expansion scenario. The remaining 13 per cent of urban growth under the Balanced scenario would then occur on

urban expansion lands. Together, the additional intensification opportunities for ground-oriented dwellings and the total greenfield lands for traditional ground-oriented dwellings represent a suitable mix of ground-oriented dwellings, where greenfield lands will provide for 62 per cent of ground-oriented demand through the traditional built-forms of single-detached, semi-detached, and rowhouse, while the built-up area will provide for 38 per cent of ground-oriented dwellings through a mix of traditional built-forms and suitable alternatives such as 613 Flat or other innovative redevelopments.

The Balanced scenario increases housing supply by providing renters and existing first-time homeowners in smaller dwellings within the built-up area or movers to Ottawa, with more geographic options for larger homes as their needs arise. There would also be more housing options for the older population that have less people in their dwellings and are looking to downsize to a smaller unit but remain within their existing community in the built-up area. This aligns with the population and household growth projections where the 35 to 54 age group represents 40 per cent of household growth and the 70 and over population represents 38 percent of household growth, as shown in Figure 13. At the same time, traditional single-detached, semi-detached, and rowhouses are also provided in the greenfield area including an urban expansion, which provide housing options within the greenfield area.

The proposed urban area expansion requires 1,281 gross hectares to accommodate 13 per cent of the urban growth or 23,300 dwelling units on 640 residential net hectares. This represents a 30 per cent reduction of the urban area expansion that would be needed under the Status Quo scenario, providing a an achievable strategy that better aligns with the directions to grow the city around its rapid transit system, making more efficient use of infrastructure, and supporting Council's direction on reducing GHG emissions. The amount of expansion hectares in the Balanced scenario is a more manageable amount to ensure proximity around rapid transit stations that will either be existing or planned. Greenfield growth located within the catchment areas of rapid transit stations will increase transportation options rather than having the automobile as the only viable option and should receive an emphasis when evaluating candidate parcels for urban expansion. The Balanced scenario is also more economical from a transit perspective by allocating as much growth as possible within the catchment areas of existing and planned rapid transit stations.

On May 2, 2019 the Ontario Government introduced their *More Homes, More Choice* action plan to provide more housing choice and bring costs down. This plan has five main points:

1. Speed: maintain environmental protections while making the development approvals process faster.
2. Cost: make costs more predictable, to encourage developers to build more housing.
3. Mix: make it easier to build different types of houses – from detached houses and townhouses to mid-rise rental apartments, second units and family sized condos. We need a variety.
4. Rent: protect tenants and make it easier to build rental housing.
5. Innovation: means everything from new housing designs and materials to creative approaches to homeownership and more. We'll encourage more innovation and creativity in Ontario's housing sector and make sure government isn't standing in the way.

The Balanced scenario provides a greater mix and encourages innovation for create new housing forms within the built-up area, while still providing for a reasonable supply of traditional greenfield housing. This strategy will lower the cost of acquiring a three-bedroom unit within the built-up area relative to the costs of the current sources being condominiums and resale homes. The Balanced scenario intends to supplement these current sources or larger housing units by providing another housing option within 15-minute neighbourhoods at more attainable prices. As noted with 613 Flats, some of these built forms can also incorporate a secondary dwelling unit as supplemental income that also adds to the rental stock. The City is aware of the challenges that the current development approvals process may have for these types of development and will examine how to make the approvals process smoother and shorter.

Climate Change Implications

Urban density and the spatial distribution of growth have a direct influence on Ottawa's energy consumption and the associated GHG emissions. Land use plays a large role in our community emissions with almost 90 per cent coming from buildings and transportation. This is primarily related to the type and location of housing and jobs as well as options for how to move around the city, and how to dispose of waste.

For Ottawa to evolve in an era of climate change, patterns of development must also evolve to reduce energy use through greater conservation and efficiency measures. While the latest GHG emission inventory shows community, emissions have dropped 14 per cent between 2012 and 2018, there is much more needed to be done in order to meet the 100 per cent emissions reduction target, approved by Council in January 2020 as part of the Climate Change Master Plan (CCMP). Applying a climate lens to the new Official Plan and its supporting documents is one of the eight priority actions set out in this plan.

The CCMP sets the course of action for the city to reduce its emissions and adapt to a changing climate. The Energy Evolution initiative is an action plan that will establish a framework to reach both corporate and community GHG reduction targets. A key component of this initiative is a comprehensive, custom-built energy, emissions and financing model. The model incorporates growth, land use, buildings and transportation data with energy conservation, efficiency and renewable energy pathway studies. The model is a tool to assess the Status Quo scenario, that is based on current Official Plan growth policies, which demonstrates the impact on emissions under the current policy environment. This integrated model demonstrates how a suite of 44 policies and actions could achieve the GHG emission reduction target of 100 per cent by 2050, including land use planning directions such as intensification.

The Energy Evolution model is currently based on the existing Official Plan growth management framework. The preferred growth management strategy for the new Official Plan will be entered into the Energy Evolution model to align the new Official Plan to the 100 per cent GHG emission reduction target. Land use considerations are factored into the model including a housing mix that supports intensification, the spatial distribution of growth in proximity to transit as well as built-in thresholds for new development to be built to higher efficiency standards. The current Energy Evolution model demonstrates the extent to which unprecedented action and investment is required in all sectors, including land use, in order to meet the 100 per cent target on GHG emissions reduction.

In the Status Quo scenario, suburban growth is developed at a further distance from the rapid transit network, decreasing transportation mode options and leading to more automobile-centric development and consequently increased GHG emissions. The Status Quo scenario from a GHG emissions standpoint is therefore not preferable. Under a Balanced scenario, new suburban growth should be within the catchment area of the existing and planned rapid transit network, increasing opportunities for more complete and connected communities. To reduce GHG emissions, for any urban expansion parcels that are beyond existing or planned rapid transit station catchment areas, a funding source for necessary transit network extensions should be identified prior to the approval of its implementing secondary plan. In a No Expansion scenario where most of the growth occurs within the built-up area, GHG emissions reduction has the greatest potential. However, given the concerns with adequate housing supply of a No Expansion scenario and uncertainty with how the remaining projected population would be accommodated, the GHG impact of a No Expansion scenario that results in a housing supply shortage is not known. Additional analysis would be required to determine the feasibility of such a No Expansion scenario on reaching the 2050 target on GHG emissions.

The variations in GHG emissions between the growth scenarios will largely depend on how well the other actions described in the Energy Evolution model are implemented, such as the electrification of most vehicles, especially in the context of a carbon budget. Every tonne of GHG emission reductions must also be weighed against other considerations that have a societal cost or benefit such as transportation, housing choice, and their associated prices/costs. Regardless of the growth scenario, in order to meet the City's GHG emission reduction targets, significant growth will be needed in Ottawa's public transportation

network to accommodate approximately 400,000 more people and to continue to shift the transportation choices of our existing residents.

Efficient Use of Infrastructure

The amount of expansion in the Balanced scenario is also more suitable for the efficient use of water, wastewater, and stormwater infrastructure by directing growth to where existing infrastructure already exists and requiring less extensions or trunk level upgrades at the periphery of the built-up area. The City will develop an infrastructure strategy to accommodate intensification and greenfield growth. For intensification growth, the strategy will review where existing capacities exist, where upgrades will be required, how these upgrades will be financed and built, and what programs and/or policies are needed to manage system capacities. For greenfield development, master servicing studies will be developed as part of the secondary plan process. The efficient use of infrastructure will also be a component of the urban expansion evaluation process areas that are more easily serviced will receive a higher score.

The next growth management steps in the new Official Plan will outline and detail the policies to implement the required additional intensification opportunities, such as 613 Flats. Proposed nodes and corridors will form the central components of creating 15-minute walkable neighbourhoods, which are ideal areas to focus the required additional intensification opportunities. This will include a review of reasonably implementable incentives and community support to assist in making additional intensification opportunities more attractive.

A more detailed transportation analysis of the recommended growth management plan will be addressed by the Transportation Master Plan (TMP) Update, currently underway and scheduled for completion in early 2022. The TMP Update will include a review and analysis of the city's future transportation needs based on the recommended growth direction in the new Official Plan. This analysis will refine and augment the current plans for the future transit, roads, walking, and cycling networks to align with growth in the new Official Plan.

Similarly, a more detailed infrastructure analysis of the recommended growth management plan will be addressed by the Infrastructure Master Plan (IMP) update, which is also currently underway. The IMP update will include a review and analysis of the city's future infrastructure needs based on the recommended growth plan in the OP. This analysis will update the current plans for trunk water and wastewater system upgrades as needed and identify additional projects to ensure that the 2046 growth needs are met.

The IMP will include a review of the infrastructure associated with the focus areas of additional intensification. The IMP will aid in implementation policies and phasing by identifying what areas can currently accommodate the required additional intensification, and what programs, regulatory measures and/or future upgrades, if any, are needed for the remaining additional intensification. Any identification of upgrades necessary to support the required intensification will require a phased implementation plan that considers financing, development timeframes, and priority within the associated capital budgets for infrastructure renewal.

In addition, the IMP will link with the new Official Plan to review the associated catchment areas for the focus areas of additional intensification. The IMP will aid in implementation policies and phasing by identifying what areas can currently accommodate the required additional intensification, and what future upgrades, if any, are needed for the remaining additional intensification. Any identification of upgrades necessary to support the required intensification will require a phased implementation plan that considers financing, estimated construction timeframes, and priority within the associated capital budgets.

Consistency with the Provincial Policy Statement

The Balanced scenario is a growth management approach that is consistent with the PPS. Although an appropriate range and mix of housing is one of the cornerstone policies regarding residential land supply, the PPS is meant to be read in its entirety with the applicable policies in applied in each situation. As summarized in Section 2, the applicable PPS policies that provide directions for growth management are with respect to an appropriate range of housing mix and choice, efficient use of infrastructure, and climate change.

An appropriate range and mix of housing begin with the allocation of growth within the built-up area through intensification and then greenfield development. Establishing an appropriate intensification rate requires balancing recently achieved intensification rates with targets that better align with other PPS policy directions. The intensification targets in the Balanced scenario provides the best balance of maintaining an appropriate housing supply with infrastructure efficiency, including transit, and climate change goals of the PPS.

The PPS requires in Policy 1.4.3 that an appropriate range and mix of housing shall consider:

- facilitating all forms of housing required to meet the social, health, economic, and well-being requirements of the current and future population;
- facilitating all forms of intensification;
- directing new housing development to where appropriate infrastructure exists or will be available;
- promoting residential densities that effectively use land and support the use of active transportation;
- requiring transit-supportive development and prioritizing intensification in proximity to transit; and,
- establishing requirements for intensification that minimize the cost of housing while also enabling compact form.

The Balanced scenario provides more housing choice for ground-oriented dwellings within the built-up area through intensification and represents a more appropriate range and mix of housing than relying on market forces to distribute dwelling types geographically. The Balanced scenario will better meet the social, health, economic, and well-being requirements of the population by providing more housing and transportation choices for weekly and daily services and will provide a more fulsome range of intensification built-forms rather than being dominated by one- and two-bedroom condominium or rental apartments. 15-minute walkable communities will provide more convenient access to transit and more active transportation options for a greater portion of the projected population. 613 Flats will also minimize the cost of housing for units at least three-bedrooms in size within the built-up area through a more compact form as shown in Figures 15 and 16 in Section 5 Intensification.

It is noteworthy that the Balanced intensification targets represent a minimum requirement. Should the market and building industry shift faster than anticipated then the additional urban expansion areas will remain in their current state as those households will not demand as much greenfield development. However, should the market and building industry not shift as required, then the anticipated additional urban expansion areas will provide the additional supply and time necessary to review the growth management approach and the PPS minimum housing supply requirements.

The Balanced scenario approach for additional intensification for three or more-bedroom units is more appropriate than the other scenarios because it provides more realistic expectations on the rate of change by 2046 and more balanced ground-oriented dwelling options in both the built-up area and greenfield area. It is also better able to meet the other PPS policy considerations for a more diverse range of housing that also includes a more appropriate geographical distribution of housing choice that better aligns with the projected population in private dwellings, facilitates additional forms of intensification,

supports the use of active transportation, minimizes the costs of new dwellings with three or more-bedrooms within the built-up area, and enables more compact form.

The new PPS also requires the ability to accommodate residential growth for a minimum of 15 years through the built-up area and the greenfield area at all times. The new Official Plan is anticipated to be adopted in 2021 and the 15-year requirement would begin from that year. The Balanced scenario proposes enough land to accommodate 89,700 dwellings within the greenfield area from 2018 to 2046, or 75,100 dwellings from 2021 to 2046 when adjusting for anticipated adoption in 2021. Figure 47 shows the greenfield demand if there was no increase in the intensification rate and it remained at 40 per cent after 2021, which is lower than the Status Quo scenario.

Figure 47: Greenfield Demand with No Intensification Increase

Timeframe	Urban Units	Intensification %	Built-up Area Units	Greenfield %	Greenfield Units
2021-2026	38,800	40%	15,500	60%	23,300
2026-2031	35,800	40%	14,300	60%	21,500
2031-2036	31,200	40%	12,500	60%	18,700
15-year total	105,800	40%	42,300	60%	63,500
Balanced scenario			14,600		75,100
Post-2036 surplus					11,700

The Balanced scenario provides more than a 15-year supply even if intensification rates remain constant at their current 40 per cent rate. In comparison, the No Expansion scenario provides for a greenfield supply of 51,700 dwelling units after 2021 and requires the intensification rate to increase at least 6 per cent every five-years until 58 per cent is reached in 2036 to maintain a 15-year supply.

Similar to the new Official Plan policy directions, the Balanced scenario is also consistent with the PPS considerations to direct growth to where appropriate infrastructure exists or will be planned. The Balanced scenario is consistent with these PPS considerations by prioritizing growth in areas such as 15-minute walkable communities within the built-up area and within the catchment areas of rapid transit stations in greenfield areas. An infrastructure strategy will examine the existing network to identify areas that can currently accommodate additional intensification, and what programs, regulatory measures, and/or future upgrades, are needed for the remaining additional intensification. The strategy will also address financial considerations.

The Balanced scenario is consistent with the PPS for supporting energy conservation and efficiency, reducing GHG emissions, and improving air quality by focussing most of the growth within the catchment areas of rapid transit stations. The Balanced scenario results in fewer annual GHG emissions than the Status Quo scenario. Focussing a reasonable amount of growth within 15-minute walkable communities in the built-up area and within the catchment areas of rapid transit stations in greenfield areas supports current and future transit use, integrates active transportation on a more frequent basis, and provides transportation options to reduce the length and number of vehicle trips. This growth management strategy supports the future environment that is needed for improving air quality, reducing GHG emissions, and adapting to a changing climate. The Balanced scenario is the most consistent with the PPS by achieving all the policy directions of the PPS with regards to housing mix and choice, efficient use of infrastructure, and climate change.

Section 8: Urban Expansion Criteria

The new Official Plan policy directions require that any urban expansion will support adopted City directions with respect to climate change, growth management, transportation, and the efficient use of infrastructure. To achieve these policy directions, urban expansion areas shall:

- Be at locations that will generate high transit ridership
- Round out some suburban communities first and extend others on new expansion lands
- Create complete communities on new expansion lands
- Require a secondary plan process, similar to current CDPs
- Avoid Agricultural Resource Areas
- Achieve an overall density of 36 units per net hectare in each community
- Provide a minimum share of 10% apartments
- Policy that requires a mix of built forms to avoid the cumulative impacts generated by high concentrations of narrow-frontage, front-driveway housing types
- Establish minimum thresholds of service (starting with day-one rapid transit availability) before planning for new expansion lands can begin

New suburban communities will plan around transit stations, have higher densities than seen in the past, and a goal of becoming complete communities, all of the attributes that sprawling communities do not have as shown in Figure 48. A secondary plan process and establishing minimum thresholds of service, including day-one ready, will help ensure that the past characteristics of sprawl do not continue. Development on any parcels that are beyond existing or planned rapid transit station catchment areas should receive secondary plan approval when a funding source has been identified and confirmed for necessary transit network extensions. The new Official Plan review should examine additional conditions that may also be required for secondary plan approval at these locations.

Figure 48 New Suburban Complete Communities vs Sprawl

Suburban Neighbourhoods of the Future

- ✓ Proximity to rapid transit
- ✓ Higher densities
- ✓ Complete community

Sprawl in the Past

- ✗ Car-centric development
- ✗ Low densities
- ✗ Single-use development

This strategy proposes updating and revising the urban area expansion criteria for parcels of land so that they more closely align with the new Official Plan policy directions and the PPS. This includes retaining existing Official Plan criteria from Section 2.2.1 that achieve the same effect, such as:

- Avoiding designated Agricultural Resource Area land unless there are no other reasonable alternatives on General Rural land (OP policy 4a)
- Avoiding Mineral Resource Areas (OP policy 4b)
- Avoiding Natural Heritage System Features (OP policy 4c)
- The availability of existing and planned servicing infrastructure, being water, wastewater and stormwater, with adequate residual capacity within the planning horizon (OP policy 4d)
- Availability of existing and planned transportation and transit infrastructure to support development within the planning horizon (OP policy 4e)
- Give priority to land in proximity to a Provincial Highway when considering new Employment land (OP policy 4f)

- Assess the relative scale of costs associated with new or upgraded infrastructure and municipal services (OP policy 4g)
- Avoid lands near to or containing major facilities or other land uses that would create land use conflicts or present hazards (OP policy 4h)
- Any other land use or impact that may prevent the achievement of the policies of the Official Plan (OP policy 4i)

Transportation criteria are designed to identify potential new urban lands in proximity to rapid public transit, local jobs, commercial services, and other existing or planned services and facilities. Proximity to jobs and existing and planned commercial services identifies sites that limit the distance travelled for future residents and to maximise the use of existing services and facilities. Accessible sites for existing City emergency services are also considered desirable and reduce the demand for new fire stations.

The PPS requires municipalities to consider the utilisation of existing servicing infrastructure capacity wherever possible to avoid or reduce the expense of adding new lands that requires new or significant upgrades to trunk water and wastewater services. In addition, the City is to consider the cost and environmental impact of stormwater treatment and discharge into receiving streams.

Other criteria will also seek to protect rural Villages and avoid or reduce conflicts with major facilities, hazard lands and existing rural uses (i.e. Country Lot Subdivisions, Pits and Quarries, Agriculture). Many of these same principles form the basis for the new Official Plan *Five Big Moves*.

Methodology

Gross Developable Area

The Balanced scenario requires a portion of projected growth to occur on 995 hectares of urban area expansion lands. These lands are expressed in terms of “gross developable land”. The term “gross developable land” refers to the land upon which dwellings, and all other uses that are normally found in new residential communities will be constructed but does not include lands to be protected as *Employment area*, as specifically defined by the PPS. Other uses found in neighbourhoods can include but are not limited to: convenience level retail, parks, pathways, schools, community centres, churches, roads, and infrastructure such as stormwater facilities.

Lands that should not be developed such as significant natural areas, or areas associates with natural hazards such as flood plains or unstable slopes will not be included in the “gross developable land”. Additionally, lands that are unsuitable for residential development due to hazards that result from human activities such as airport noise, landfills, pit and quarry operations will not be included in the calculation of “gross developable land”. Land impacted by theses uses will not be evaluated or will not contribute to the needed land supply. Land required to be protected as part of a *Prime Agricultural Area* by the PPS will not be considered unless there are no other suitable candidate lands.

The objective is to identify enough land abutting, and in close proximity to, the current urban boundary, that will provide the estimated “gross developable land” needed to provide the most efficient and cost-effective additions to existing communities.

Identifying Candidate Parcels for Urban Expansion

Candidate Parcels will generally comprise individual rural lots located within one to two kilometres of the current urban boundary. These lots may vary considerably in size, in current use and be impacted by other uses around them. The City’s Official Plan policies provide some screening and requires that land designated *General Rural Area* and *Rural Natural Features* be evaluated as candidate lands first. Some *Rural Natural Features* land may also be impacted by significant woodlands which will impact the potential usable land supply in this designation.

Small rural residential lots (severed or subdivided) will not be scored as candidate sites but could be added to the urban area if the surrounding land is ultimately selected. Typically, these parcels are already developed and do not add to land supply.

The land with the following characteristics will not be considered as candidate land and will not be scored, and where these features impact part of a scored parcel, that part will not be considered developable area:

- Regulated wetlands including Provincially Significant Wetlands (PPS)
- Valley or escarpment land that is subject to slip or subsidence
- Land designated Natural Environment Areas in the City's Official Plan
- Flood Plain land
- Bedrock and Sand and Gravel Resource land, designated and or zoned for mineral extraction, (except where the City has evidence that the resource is depleted, the licence is to be surrendered and the site is to be rehabilitated by 2036)
- Land identified or impacted by existing or historic Landfill operations
- Land within one kilometre of an existing *Village* (except Notre-Dame-des-Champs).

Where a parcel is cut by an obstacle such as a major watercourse, a major ravine or some other barrier that effectively divides the land and limits access to or developability of a portion of the land, that parcel may be divided into two or more parcels for evaluation purposes. For example, a parcel that straddles watershed catchments with significantly different servicing approaches may be divided and evaluated as separate parcels rather than eliminating the entire parcel due to the difficulty servicing only part of the land.

While the above criteria will exclude some lands from consideration as urban land some other criteria will affect the amount of gross developable land that can be used for residential purposes. These criteria include regulatory or operational limits for noise, vibration or impacts close to uses such as Airports, existing or proposed Pits and Quarries, landfill sites and military facilities, as well as minimum distance separation from applicable farm operations.

Evaluation Criteria

The overall objective is to have criteria that first make the best use of existing infrastructure capacity and community resources in order to address the City's commitment to reduce GHG emissions, create 15-minute communities and result in the lowest long-term cost for the City. These criteria are labelled "Factors" as summarised in Table 1.

Table 1: Criteria and Scoring Summary by Category			
Factors	**Criterion**	**Potential Score**	**% of total**
Engineering (serviceability)	Water	8	
OP Sections 2.2.1 4d & 4g	Wastewater	8	
	Stormwater	8	
	Servicing Integration Factor	6	
	Servicing Risk Factors	0 to -4	
Max for Engineering		**30**	**33%**
Transportation	Availability of Rapid Transit	18	
OP Sections 2.2.1 4e, 4g & 4h	Distance to Rapid Transit Station	12	
	Proximity to jobs - median commute distance (all modes)	8	
	Proximity to Convenience Retail- median distance (all modes)	5	
	Proximity to Major City Facilities	5	
	Proximity of Emergency Services – Fire response	4	
	Potential Arterial Road upgrades	0 to -8	
Maximum for Transportation		**52**	**58%**
Community Integration	Connectivity - Barriers to efficient urban integration	8	
Potential Total Integration		**8**	**9%**
Conflicting Uses	Agriculture Resource within 250m	0 to -4	
OP Sections 2.2.1 4 a & c	Natural Linkages	0 to -4	
Potential Total for Conflicting		**0**	
Potential Maximum Score		**90**	**100%**

Engineering Factors

Engineering (serviceability) factors assess the ease with which water, wastewater and stormwater services can be provided to accommodate additional development without any or with only minimal need for major upgrades to the existing trunk systems or downstream watercourses. The criteria also consider potential long-term liabilities and the asset management burden for the City where new trunk services are needed.

The criteria is applied considering the individual serviceability of a parcel, then in a second step, considers the cumulative impact of multiple sites in proximity, which may make have a positive effect on scoring due to economies of scale where additional capacity may be required, or possible a negative effect on scoring, where the addition of individual parcels begins to exceed the residual capacity of trunk-level systems.

Transportation Factors

The Transportation Criteria respond to the transportation and mobility focus of the new Official Plan policy directions for sustainable transportation (walking, cycling, Bus Rapid Transit (BRT) and Light Rail Transit (LRT)). Sites will be scored for proximity to existing and planned BRT/ LRT Stations and reflect the

staged provision of those transit services. Highest scores will go to sites closest to BRT and LRT stations already in operation or approved and under construction as part of Stage 2 LRT. Stations on latter stages of the Rapid Transit System will be scored to reflect the City's current timing for provision of the stations.

Distances travelled to existing and proposed employment; convenience retail and major City facilities in adjacent communities are assessed considering all modes of transportation (travel by walking, cycling, transit and car). Higher scores are awarded to lands that have higher numbers of job opportunities nearby and that can take advantage of nearby shopping and recreation facilities as development proceeds.

Responsiveness to existing emergency services is based upon response time/distances from existing City fire services and will highlight areas where new fire stations may be required.

"Potential Arterial Road Upgrades" considers the likelihood of the future expense to upgrade the arterial road system.

Community Integration Factors

Community integration ranks the ability of the parcels to be integrated with the adjacent parcels. Typically, this assesses any limitation to connect to adjacent parcels i.e. unable to be connected by new roads or to integrate development in any particular direction. Connectivity can be limited by obstructions such as major water courses, abutting land uses (e.g. existing rural development), rail lines, highways, natural environment areas, or agricultural land. These limitations are usually a permanent obstruction.

In order to be considered, parcels or clusters of parcels must be able to form a logical addition to the urban area. Parcels that cannot be directly integrated due to barriers such as, intervening development, environmental features (wetlands), agricultural lands and pits and quarries, will be excluded from consideration irrespective of how they may score in various criteria. These parcels if included would create a non-contiguous urban area by "leap-frogging", and lead to inefficient development.

Conflicting Rural Use Factors

Proximity of new urban development to agricultural resource land, villages and country lot subdivisions are identified as the main areas of potential conflict. Generally, land within one kilometre of a village will not be considered unless the village is already partially surrounded by the urban area, for example Notre-Dame-des-Champs. Sites within 250 metres of land designated *Agriculture Resource Area* will lose points in this scoring system as a surrogate for minimum distance separation. Proximity of urban development to rural subdivisions is addressed as a servicing consideration as part of the Engineering factors.

The natural linkage criterion considers the impacts of candidate urban expansion areas on identified natural linkages. Natural linkages identify existing or potential natural connections between core natural areas of the city's Natural Heritage System, which should be maintained or enhanced to ensure the long-term sustainability of the system. These landscape linkages appear in Annex 16 to the current Official Plan. The City will review the boundaries of these linkages in the new Official Plan. The natural linkages criteria impact the final score of a parcel or group of parcels but does not eliminate a parcel from consideration.

Measurements and Scores

Each candidate area is to be evaluated and scored based upon the detailed criteria in Table 2. Criteria that relies upon distance measurements will be made to or from the centroid of the parcel being evaluated. Where part of a parcel is removed because it is not to be considered as candidate land, or a parcel is divided into two or more parts in order to be evaluated fairly the remainder of the parcel will be assigned a new centroid from which measurements will be made.

Distance thresholds are based upon travel over existing or planned (approved CDP or secondary plan) roadways/pathways. However, since the location and pattern of the rural road network does not provide

the same accessibility as the urban road network, distance measures have been reduced by 25 per cent and measured as a radial (straight line) distance. For example, 2.5 km travel by roads becomes 1.9 km straight line distance. This direct measure reduces inequity due to the larger rural lot fabric and the lack of a more accessible urban road pattern.

In some criteria parcels will be ranked in comparison to other parcels and not to specific standards such as the relative distance to specific facilities. In this case the parcels scoring may be grouped, such as the closest 25 per cent, 50 per cent, and so on.

Detailed Scoring

Table 2: Detailed Evaluation Criteria and Scores

Criteria	Description	Scores	Max Score
Engineering (Serviceability)			
1. Water PPS policies (See Appendix 1 policies (1.1.1 e & g) (1.1.3.2 a) 2. (1.1.3.8 b) 1.6.1 & 1.6.3 1.6.6.1 a-d	Water scores will be assigned to individual parcels based on the anticipated scope of servicing requirements determined through high-level servicing strategies formulated for each of the candidate urban expansion areas. Adjustments to the scores indicated below may be justified for a candidate area(s), such as: • Pump station upgrade would only involve addition of new pumping capacity, but upgrade remains within current rated capacity. • Servicing a candidate site could require a new drinking water pumping station and pressure zone but could also provide an opportunity to improve service levels in existing adjacent areas. Scores for each site range from 0 to 8 based on consideration of the factors in the next column.	• **8 points:** Where trunk systems, in proximity, have adequate residual capacity. local conditions that do not require any new pump facilities, or existing facility upgrades, to overcome topographic constraints. No major highway, railway and/or water crossing(s) required • **6 points:** Where trunk systems, in proximity, have adequate residual capacity, local conditions that do not require any new pump facilities, or existing facility upgrades, to overcome topographic constraints. Major highway, railway and/or crossing(s) required. • **4 points:** Where localized upgrades to off-site trunk facilities required to establish enough capacity; local conditions do not require any new pump facilities, or existing facility upgrades, to overcome topographic constraints. • **2 point:** Where topographic conditions require upgraded existing pumping facilities to meet level of service requirements; OR Extensive and major upgrades to off-site trunk	**8**

Table 2: Detailed Evaluation Criteria and Scores			
Criteria	**Description**	**Scores**	**Max Score**
		facilities required to establish enough capacity. • **0 points:** Where extensive and major upgrades to off-site trunk facilities, or new local storage facility required to establish enough capacity; and topographic conditions which require new or upgraded pumping facilities to meet level of service requirements.	
2. Wastewater (Sanitary) PPS (See Appendix 1) policies (1.1.1 e & g) (1.1.3.2 a) 2. (1.1.3.8 b) 1.6.1 & 1.6.3 1.6.6.1 a-d	Wastewater scores will be assigned to individual parcels based on the anticipated scope of servicing requirements determined through high-level servicing strategies formulated for each of the candidate urban expansion areas. Adjustments to the scores indicated below may be justified for a candidate area(s), such as: • Pump station upgrade would only involve addition of new pumping capacity, but upgrade remains within current rated capacity. Scores for each site range from 0 to 8 based on consideration of the factors in the next column.	• **8 points:** Where trunk systems in proximity have adequate residual capacity; local conditions do not require any new pump facilities, or existing facility upgrades, to overcome topographic constraints; and no major highway, railway and/or water crossing(s) or excavations required. • **6 points:** Where trunk systems in proximity have adequate residual capacity; local conditions do not require any new pump facilities, or existing facility upgrades are needed to overcome topographic constraints. Major highway, railway and/or water crossing(s) or excavations required. • **4 points:** Where localized upgrades to off-site trunk facilities are required to establish sufficient capacity; local conditions do not require any new major pump facilities, or existing facility upgrades, to overcome topographic constraints. • **2 points:** Where localized upgrades to off-site trunk facilities	**8**

Table 2: Detailed Evaluation Criteria and Scores			
Criteria	**Description**	**Scores**	**Max Score**
		are required to establish sufficient capacity and topographic conditions require new major or upgraded pumping facilities to meet the level-of-service requirements; **OR** Extensive and major upgrades to off-site trunk facilities are required to establish sufficient capacity. • **0 points:** Where extensive major upgrades to off-site trunk facilities to establish sufficient capacity, **AND** topographic conditions which require major new pump facilities, or major upgrades to existing pump facilities to meet level of service requirements.	
3. Stormwater PPS (See Appendix 1) policies (1.1.1 e & g) (1.1.3.2 a) 2. (1.1.3.8 b) 1.6.1 & 1.6.3 1.6.6.1 a-d	Stormwater scores will be assigned to individual parcels based on: • expected grade raise requirements relative to restrictions; and other topographic constraints to drainage • capacity and condition of surface water outlets and resulting storm water management criteria, considering suitability for Low Impact Development (LID); For Potential Urban Expansion Areas Total scores for Stormwater ranged from 0 to 8 based on consideration of the factors listed in a-e below. The maximum possible score 8.		
a) Stormwater-characteristics and availability of surface water outlets PPS (See Appendix 1) policies 2.2.1 a -c & h 1.6.1 & 1.6.3 1.6.6.1 a-d	Scores for each site range from 0 to 2 based on consideration of the factors in the next column	• **2 points:** Major Surface Outlet Available: No issues anticipated with capacity or condition of the receiving watercourse. Standard quantity and quality SWM controls • **1 point:** Minor Surface Outlet Available: Some issues are anticipated with the capacity and/or condition of the receiving watercourse. Requires additional volume/flow controls	**2**

Table 2: Detailed Evaluation Criteria and Scores			
Criteria	**Description**	**Scores**	**Max Score**
		• **0 points:** Limited Surface Outlet Available: Issues are anticipated or known with the capacity and/or condition of the receiving watercourse. Requires additional volume/flow controls and is not suitable for infiltration-based LID	
b) Stormwater - expected grade raise requirement relative to restrictions and other topographic constraints on drainage.	Scores for each site range from 0 to 6 based on consideration of the factors in the next column	• **6 points:** No observable grade restrictions and/or topographic constraints anticipated that would result in submerged sewers or alteration of existing watercourses. • **3 points:** Some grade restrictions and/or topographic constraints that could potentially result in submerged sewers or alteration of watercourses. • **0 points:** Significant grade restrictions and/or topographic constraints that would result in submerged sewers, alteration of watercourses and/or the use of EPS fill.	**6**
4. Servicing Integration Factor PPS (See Appendix 1) policies 2.2.1 a -c & h 1.6.1 & 1.6.3	The Servicing Integration Factor represents the lowest common servicing denominator that has the potential to affect the timing of development and the cost of major trunk system upgrades. The Integration Factor will be used to enhance the score of candidate sites with (highly or moderately) favourable water, wastewater, and stormwater conditions. This is to enable a differentiation of such sites from those that that may score well for two services but, have a major deficiency in a third service.	• **6 points:** Scores for water, wastewater and stormwater criteria are 4 or higher. • **4 points:** The score for one of the water, wastewater or stormwater criteria is 1 or 2. Remaining scores are 4 or higher. • **2 points:** The score for two of the water, wastewater, or stormwater criteria is minimum 2. Remaining score is 4 or higher. • **0 points:** The score for one or more of the water, wastewater or stormwater criteria is 0.	**6**

Table 2: Detailed Evaluation Criteria and Scores			
Criteria	**Description**	**Scores**	**Max Score**
5. Servicing Risk Factors (Serviceability Penalty Factors) PPS (See Appendix 1) policies (1.1.1 e & g) 1.6.6.1 a-d	Penalty factors are proposed to account for potential site-specific development and servicing issues that would not otherwise be accounted for in the water, wastewater or stormwater criteria. Penalty factors are proposed to address the following potential issues: a) Differential settlement risk due to compressible clays, b) Shallow depth to bedrock, c) Parcel includes large depression/hydrologic storage area, d) Risk to private wells due to rock blasting required for servicing.	• **- 2 points:** Extensive presence of Grey compressible clays in the area **OR** • **- 1 point:** Extensive presence of shallow bedrock (<5m) in the area **OR** • **- 2 points:** Parcel abuts country lot subdivision and extensive presence of shallow bedrock (<5m) in the area • **- 2 points:** Depression storage area exceeds 10% of the parcel area.	**Potential loss of 4 points**
			Max Engineering Score 30
Transportation			
6. Availability of Rapid Transit PPS (See Appendix 1) policies 1.1.1 e), 1.1.3.2a) 2, 4 & 5,	Availability of existing or planned rapid transit (LOS A & B) station within 2.5 km (1.9 km radial) The distance threshold of 2.5 km (1.9km radial) is based on a 5-minute local bus ride (at 30 km/hr) and a 10-minute bicycle ride (at 15 km/hr).	• **18 points:** Available now / Stage 2 LRT • **14 points:** Shown in current 2031 Affordable Network Plan • **10 points:** Shown in current Ultimate Network Plan or EA • **2 points:** Shown as a conceptual future transit corridor (grey arrow) • **0 points:** No Rapid Transit planned	**18**
7. Proximity to nearest Rapid Transit Station PPS (See Appendix 1) policies	Distance to nearest rapid transit station (existing or planned) max 2.5 km (1.9 km radial) The distance threshold of 2.5 km (1.9km radial) is based on a 5-	• **12 points:** 0 to 0.6 km • **8 points:** >0.6 km to 1.1 km • **4 points:** >1.1 km to 1.9 km • **0 points:** >1.9 km	**12**

Table 2: Detailed Evaluation Criteria and Scores			
Criteria	**Description**	**Scores**	**Max Score**
1.1.1 e), 1.1.3.2a) 2, 4 & 5,	minute local bus ride (at 30 km/hr) and a 10-minute bicycle ride (at 15 km/hr).		
8. Proximity to Jobs PPS (See Appendix 1) policies 1.1.1 e), 1.1.3.2 a) 2, 4 & 5,	Urban expansion areas that have a greater number of opportunities for local employment are preferable. The Ottawa median commute to work distance for all modes of travel was used to rank candidate sites by the potential number of jobs within a distance of 11.4 km (8.6 km radial). The parcels capturing the higher number of jobs within this distance achieve the most points. **Note:** Scores for existing jobs are weighted by 1 while planned jobs are weighted by 0.5. The numbers of jobs in each class are documented.	• **8 points:** >75% to 100% • **6 points:** >50% to 75% • **4 points:** >25% to 50% • **2 points:** 0% to 25%	**8**
9. Proximity to Convenience Retail PPS (See Appendix 1) policies 1.1.3.2a) 2, 4 & 5,	Reflects proximity to convenience retail clustered around a major grocery store. Scores sites that on day one will take advantage of existing and known proposed commercial services. Proximity to convenience retail for all modes has a city median distance of 3.8 km converted to 2.9km radial distance.	• **5 points:** 0 to 0.6 km • **3 points:** >0.6 km to 1.1 km • **1 point:** >1.1km to 2.9 km • **0 points:** > 2.9 km	**5**
10. Distance to Major City Facilities PPS (See Appendix 1) policies 1.1.3.2a) 2, 4 & 5,	Distance to one or more Major Recreation Facilities **Note**: Major Recreation Facilities which contain a Pool and 2 or more other indoor and outdoor recreation facility types on one site, such as arena(s), community	• **5 points:** 0 to 1.5 km • **4 points:** >1.5 km to 2.3 km • **3 points:** >2.3 km to 3.0 km • **2 points:** >3.0 km to 3.8 km • **1 point:** >3.8 km to 4.5 km • **0 points:** >4.5 km	**5**

Table 2: Detailed Evaluation Criteria and Scores			
Criteria	**Description**	**Scores**	**Max Score**
	centre, library, major sports fields, etc.		
11. Distance to Emergency Services – Fire PPS (See Appendix 1) Section 1.6.3 & 1.6.5	Emergency Services (Fire) – Estimated response within 5 min and based upon assumed service area information provided by Fire Services.	• **4 points:** 2 or more responders within 5 mins • **3 points:** 1 responder within 5 mins • **0 points:** 1 responder >5 mins	**4**
12. Potential Arterial Road Upgrades PPS (See Appendix 1) policies 1.1.3.2 a) 2	Scoring seeks to reflect the relative cost of possible Arterial Road construction or upgrades required by future development. Potential is assessed based on, the distance travelled over roads that provide the shortest travel distance to an existing urban arterial road system or an existing series 400 Highway Interchange. Each parcel is put into one of four groups (closest to farthest) based on proximity / distance measured.	• **0 points –** Frontage on an existing serviced Urban Arterial Road or site is within 1.9 km of planned rapid transit **First Group: 0% to 25% (closest distance)** • **- 2 point** **Second Group: >25% to 50%** • **- 4 points** **Third Group: >50% to 75%** • **- 6 Points** **Fourth Group: >75% to 100% (furthest distance)** • **- 8 Points**	**Potential loss of 8 points**
			Maximum Transportation Score 52
Community Integration			
13. Connectivity PPS (See Appendix 1) policies 1.1.3.2 a) 2	It is assumed that all candidate lands can be developed with an urban road network including existing and new arterials and collector roads, cycle routes,	• **8 points:** good – totally unobstructed in all directions;	**8**

Table 2: Detailed Evaluation Criteria and Scores			
Criteria	**Description**	**Scores**	**Max Score**
	pathways and greenspaces. This factor recognises that some parcels may have limitations to the provision of road access or integration with urban area lands in some directions, due to barriers or physical obstructions such as landform (ravines, major watercourses, significant natural areas etc.) or man-made obstructions such as railways, highways or existing development (e.g. country lot subdivisions, land designated for pits or quarries).	• **6 points:** less than good – full or partial obstruction in one direction; • **4 points:** medium – full obstruction in one direction and a partial obstruction in another direction; • **2 points:** poor – full obstruction in 2 directions • **0 Points:** very poor – full obstructions in 3 directions	
		Maximum Integration Score 8	
Conflicting Uses			
14. Conflict with Agricultural Land Uses	Agricultural Resource Area within 250 metres of the parcel	• **0 points:** No • **- 4 points:** Yes	**Potential loss of 4 points**
15. Natural Heritage Linkages PPS (See Appendix 1) policies 2.1.2	Presence of features that form part of the Natural Heritage Linkages	• **0 points:** Natural Heritage Linkage does not impact the parcel • **- 2 points:** The Natural Heritage Linkage impacts less than 25 % of the parcel • **- 4 points:** The Natural Heritage Linkage impacts more than 25% of the parcel	**Potential loss of 4 points**
		Maximum Loss Conflicting Uses - 8	
		Maximum Site Score	**90**

Ranking and Selecting Candidate Land

The evaluation process proposes two scoring “passes” where individual parcels are scored on their own and then a cluster of parcels are considered together reflecting infrastructure efficiencies.

First Pass Scoring (Individual Parcels)

Parcels will be scored and ranked in order of their total score as outlined above. Where parcels have the same “total-score” the parcels will be ranked first based on their Transportation Score and, if still tied, then by their Servicing Score.

Second Pass Scoring (Clusters of Parcels)

While individual parcels may score poorly because they are difficult or costly to service those difficulties may be reduced if the parcel is considered as part of a larger area. This clustering is a consideration for servicing and may allow difficulties to be overcome or made more cost effective. Therefore, where several parcels in a cluster have a range of scores the City may evaluate and score the cluster as if it were a single parcel.

Those parcels or areas selected for inclusion in the urban area for residential purposes will be those parcels needed to provide a “Gross Developable Area” closest to (over or under) the number of gross hectares required for urban expansion.

Minimum Scoring

Candidate parcels will be ranked in order by their total score, from highest to lowest, and must have a Transit Score (Criteria 6 and 7) greater than zero, a combined servicing score (Criteria 1 to 5) of 14 or greater and a total score of at least 30 points.

Potential Second Evaluation

The initial evaluation of individual parcels (Pass1) and clustered parcels (Pass 2) will likely identify lands that readily complete existing communities in a logical and efficient manner. If the event insufficient land is identified to meet a required expansion, the Report to Council (ACS2019-PIE-EDP-0046) that introduced Policy Directions for the new Official Plan set out three possibilities, as follows:

If an urban area expansion is deemed necessary and there is insufficient General Rural land to meet the required urban land budget, there are three possible directions that the City may have to consider in response to a shortfall in suitable General Rural land, and they all have significant implications. They are:

> 1. Consider increasing the amount of intensification required to reduce the demand for new urban land after 2036; or
>
> 2. Consider committing to bringing transit and other services to rural lands that are more remote and which require higher public costs for those services. This may also necessitate phasing of future development of the land pending the City’s commitment of funds; or
>
> 3. Consider lands in the Agricultural Resource Area that are close to existing communities and committed transit and piped services. The Provincial Policy Statement provides for this course of action, where there are no reasonable alternatives that avoid agricultural land.
>
> A hybrid of all three may also be considered if appropriate. Staff will advise if it is necessary to consider one or a combination of these three options […] when the draft Official Plan is tabled.

Additional analysis in a future report may be required on how the additional housing demand will be addressed in this situation

Appendix List

1. Selected Growth Management Policies, PPS 2020
2. Vacant Urban Residential Land Survey, July 1, 2018 update
3. Village Residential Land Survey, July 1, 2018 update
4. Analysis of Ottawa Residential Net to Gross Ratios