

EXISTING DESIGNATED GREENFIELD AREA DENSITY ANALYSIS

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1.0 INTRODUCTION

1.1 WHAT IS THE DESIGNATED GREENFIELD AREA?

The 2006 Growth Plan introduced the term Designated Greenfield Area. The term, with a slightly modified definition, remains in the 2019 Growth Plan (as amended), as follows:

“Lands within settlement areas (not including rural settlements) but outside of delineated built-up areas that have been designated in an official plan for development and are required to accommodate forecasted growth to the horizon of this Plan. Designated greenfield areas do not include excess lands.”

Designated Greenfield Area, or DGA, is the land that is located within the urban boundary, but outside of the built-up area. The built-up area is defined through the Growth Plan and is essentially the developed portion of the urban area. DGA lands are generally undeveloped, though as will be discussed below, a significant portion of Hamilton’s DGA land has been developed since 2006 or is subject to approved development applications.

The schematic in Figure 1 illustrates the DGA, the built-up area and the urban boundary.

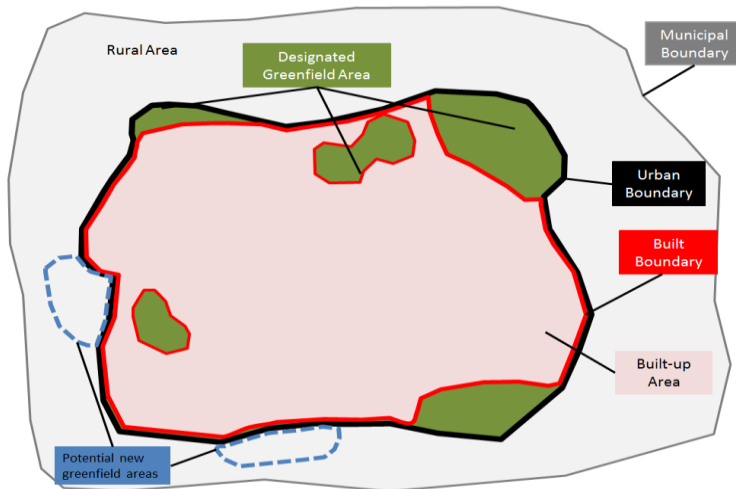


Figure 1: Schematic diagram illustrating Designated Greenfield Area (DGA)

The City’s DGA includes DGA lands which are already identified in the Official Plan and located within the urban area (known as “Existing DGA” for the purposes of this paper). However, if it is identified through the Municipal Comprehensive Review (MCR) that the City requires additional land, through urban boundary expansion, to accommodate growth to the year 2051, any new lands added to the urban area will become part of the DGA (known as “New DGA” for the purposes of this paper). The focus of this paper is on the City’s Existing DGA lands and a review of the planned density of those lands, including opportunities to increase the planned density. If New DGA lands are added to the urban

boundary through the MCR, a consideration of an appropriate density target for those lands will be undertaken separately as part of the Land Needs Assessment.¹

1.2 PURPOSE OF THE DESIGNATED GREENFIELD AREA ANALYSIS

The DGA Analysis fulfills the following objectives:

- Provide an overview of Hamilton’s Existing DGA lands in terms of gross and net areas, and by category of development status (i.e. Registered Plan; Draft Approved Plan; Pending Development; and, Potential Development Lands);
- Identify opportunities to increase the planned density of Hamilton’s Existing DGA lands to the 2051 planning horizon to meet Growth Plan targets; and,
- Identify an appropriate planned density target for the City’s Existing DGA to determine conformity with the Growth Plan minimum required target.

This document is being prepared as part of Hamilton’s Municipal Comprehensive Review to demonstrate compliance with Section 2.2.7 of the Growth Plan.

2.0 POLICY REVIEW

2.1 GROWTH PLAN, 2019, AS AMENDED

Section 2.2.7 of the Growth Plan provides policy direction for the Designated Greenfield Area. The focus of the policies is primarily related to the establishment of density targets for the DGA, and direction for municipalities on how to plan for those targets.

“2.2.7.1 New development taking place in designated greenfield areas will be planned, designated, zoned and designed in a manner that:

- a) supports the achievement of complete communities;*
- b) supports active transportation; and*
- c) encourages the integration and sustained viability of transit services.”*

Policy 2.2.7.1 is a general policy promoting planning of DGA lands to be complete communities which support all modes of transportation, and are transit friendly. Identifying opportunities to increase the planned density of the Existing DGA will assist with meeting these planning objectives.

¹ It is appropriate to consider the density of the Existing DGA separate from the New DGA. As is shown in this report, development opportunities within the Existing DGA are constrained and much of the area is already subject to planning approvals. Opportunities to increase the planned density of the Existing DGA are therefore limited, whereas greater opportunity and flexibility will exist in any New DGA areas added to the urban boundary.

“2.2.7.2 The minimum density target applicable to the designated greenfield area of each upper and single tier municipality is as follows:

- a) The Cities of Barrie, Brantford, Guelph, Hamilton, Orillia and Peterborough and the Regions of Durham, Halton, Niagara, Peel, Waterloo and York will plan to achieve within the horizon of this Plan a minimum density target that is not less than 50 persons and jobs per hectare;”*

Policy 2.2.7.2 identifies the density target of 50 persons and jobs per hectare for the City of Hamilton. This target is applicable to both the Existing DGA as well as any new DGA lands which may be added to the urban boundary. It important to note that the target is a minimum, and the City may plan to achieve a higher target. As is shown below in Table 4 of this Report, the City’s planned density of the Existing DGA already exceeds the Growth Plan minimum target.

“2.2.7.3 The minimum density target will be measured over the entire designated greenfield area of each upper- or single-tier municipality, excluding the following:

- a) natural heritage features and areas, natural heritage systems and floodplains, provided development is prohibited in these areas;*
- b) rights-of-way for:*
- i. electricity transmission lines;*
 - ii. energy transmission pipelines;*
 - iii. freeways, as defined by and mapped as part of the Ontario Road Network; and*
 - iv. railways;*
- c) employment areas; and*
- d) cemeteries.”*

Policy 2.2.7.3 outlines the technical requirements for measuring density of the DGA. The density of the DGA is measured across the entirety of the DGA area to which the target applies. For the case of this paper, the measurement of the DGA density is applied across the entirety of the Existing DGA already identified in the UHOP.

Policy 2.2.7.3 also identifies the lands to be excluded from the DGA density calculation, those being undevelopable lands such as natural heritage features and areas, rights-of-way, and cemeteries, as well as designated employment areas. This policy is a significant revision from the 2006 Growth Plan, which only allowed for natural features to be excluded from the DGA calculation. The addition of the extra features / areas for exclusion will assist municipalities in meeting the required density targets by not including undevelopable areas, and employment lands which tend to develop at lower density.

The remainder of this Report will provide an overview of the City’s Existing DGA, including current planned density, and further, identify opportunities within the City’s Existing DGA to plan for a density increase in accordance with Growth Plan requirements.

2.2 URBAN HAMILTON OFFICIAL PLAN (UHOP)

“A.2.3.3.3 *Greenfield areas* shall be planned to achieve an overall minimum density of 50 people and jobs per hectare. The *greenfield* density target shall be measured over Hamilton’s *greenfield area*, excluding natural heritage features designated in this Plan. The *greenfield area* includes designated employment areas. On employment lands, the City shall plan to meet a density target of 37 people and jobs per hectare. On non-employment lands, densities will need to achieve a minimum average density of 70 persons and jobs per hectare to meet the overall density target.

E.3.7.1 New greenfield communities shall be designed with a unique and cohesive character. Buildings, streetscapes, street patterns, landscaping, open spaces, and infrastructure shall be designed to contribute to this character.”

The UHOP contains policies on the DGA, including a required density target. The UHOP identifies an overall target of 50 pjh, but breaks this target down further into employment areas (target of 37 pjh) and non-employment areas (70 pjh). This differentiation was made to account for the generally lower density development of employment lands. A higher non-employment target was required to offset the employment areas and balance out to the overall target of 50pjh. With the revised Growth Plan policy direction which now removes employment areas from the DGA density calculation, UHOP policy A.2.3.3.3 will need to be reviewed and updated as part of the future Official Plan Review.

3.0 EXISTING DGA OVERVIEW:

3.1 EXCLUSIONS

The gross land area of the City’s Existing DGA totals more than 4,200 ha. However, for the purpose of density analysis, the Growth Plan provides that certain lands can be excluded from the density calculation. Policy 2.2.7.3 of the Growth Plan outlines the lands which may be excluded from the DGA density calculation due to being considered non-developable, or being designated as employment area.

Table 1 breaks down the amount of land area, in hectares, of each exclusion area from the DGA density calculation.

Table 1: Growth Plan Exclusions from Calculation of DGA Density

Existing DGA Breakdown	Area (ha)	%
Total Existing Designated Greenfield Area (Gross)	4,231	100
Total Exclusions	2,090	49
Employment Lands	1,780	42
Core Areas (non-employment)	305	7
Rights of Way (non-employment)	0	0
Cemeteries	5	0.1
Net “Community” (residential, institutional, commercial) Developable Area (based on 2019 Growth Plan)	2,140	51

Source: City of Hamilton, year end 2019

Table 1 above identifies the portion (42%) of the City’s Existing DGA that is designated employment land. This confirms the significance of the revisions to the 2019 Growth Plan which allow municipalities to net out employment lands for the purposes of calculating DGA density. Employment lands traditionally develop at a lower density than non-employment lands, and therefore including the employment areas in the DGA density calculation had the effect of lowering the overall planned density. This paper focuses on the non-employment DGA lands. Discussion on the City’s employment lands and opportunities to intensify those lands is discussed in the City’s Land Needs Assessment.

3.2 DEVELOPMENT STATUS OF EXISTING DGA

The built boundary line, which separates the built-up area from the DGA, was established by the Province in 2006. At that time, the lands that were identified as DGA were largely undeveloped or underdeveloped (e.g. large lot with one single detached dwelling). In the 14 years since that delineation, a portion of the DGA lands have now been developed, or have existing or pending development approvals (plans of subdivision). Despite this fact, there were no modifications made to the built boundary line during the co-ordinated provincial plan review in 2015. Therefore, a portion of the lands that are classified as Existing DGA are already fully or partially built-out.

Further, another significant subset of DGA lands have already been approved for development through a Registered or Draft Approved Plan of Subdivision, or are subject to a Pending Plan of Subdivision application. These DGA lands are broken down into three categories:

- Registered – lands within a registered plan of subdivision for which building permits have not been issued.
- Draft Approved – lands within a draft approved, but not registered, plan of subdivision.
- Pending Plans – lands within a draft plan of subdivision application that has been submitted to the City, but not approved.

Table 2 summarizes the breakdown of Existing DGA land by development status, not including employment lands:

Table 2: Development Status of DGA Lands

Existing DGA Category (Non-employment)	Land Area (gross ha)
Fully or Partially Built (i.e. building permits issued)	910
Registered (no permits issued)	75
Draft Approved	365
Pending	115

Source: City of Hamilton VRL, year end 2019

It is apparent from the chart above that a significant portion of the Existing DGA lands are already developed for residential purposes or are subject to an approved or pending draft plan of subdivision application. A map of the above noted breakdown is attached as Appendix “A”.

Further constraints to residential development of the Existing DGA are also shown on Appendix “A”, including lands designated for employment uses and open space lands (i.e. parks, natural features, cemeteries). The Existing DGA lands that are not subject to an existing development application / approval, or constrained for development by one of the features above, is limited.

4.0 PLANNED RESIDENTIAL SUPPLY INFORMATION

To ultimately determine the DGA planned density, it is necessary to consider the potential residential supply of the City’s Existing DGA lands. For the purposes of this analysis, the planned residential supply is defined as the lands remaining (after allowable Growth Plan net-outs) that are currently designated in the UHOP for residential uses over the plan horizon. This includes mostly vacant lands as identified in the City’s Vacant Residential Land Inventory (section 4.1 below) as well as a small amount of currently occupied lands that can be reasonably expected to redevelop with new residential uses in accordance with their current designation (section 4.2 below). Information on the City’s designated and available planned residential land supply comes from two different sources discussed below:

4.1 VACANT RESIDENTIAL LAND INVENTORY (VRLI)

The VRLI classifies development potential of vacant residential lands, including DGA lands, by current development status. The VRLI includes lands in four categories:

- Registered Plan - These lands have the highest degree of development certainty.

- Draft Approved Plan - These lands also have a high degree of development certainty, but could be subject to revision in terms of total unit count, type etc.
- Pending Plans - Development potential can be estimated for lands within this category based on the submitted plan, but it is noted that this is an estimate only, and subject to change as the plan moves through the approval process.
- Potential Development – vacant residential lands for which no draft plan of subdivision application has been submitted. Development potential for these lands is estimated using a variety of sources, including Secondary or Neighbourhood Plan designations, zoning, surrounding land uses and density, or other types of pending development applications (eg. site plan control). These lands have the least degree of development certainty. Staff undertook a review of these lands to determine if there is opportunity to increase the assumed development potential based on updated policy direction or surrounding development in the area (see Section 5.0 below).

For the purpose of calculating the DGA planned density to 2051, all lands which are currently designated for residential purposes within the VRLI were assumed to develop within the planning horizon. Of note, lands which are currently subject to a development application for redesignation to a residential designation were not included. An example is the proposed application to redesignate District Commercial lands in the vicinity of Highways 5 & 6 (Flamborough) to a Mixed Use designation. The lands that are subject to this application were not included in the planned density calculation above because the application is in the early stages and the ultimate outcome of the applications is unknown at this time.

The following chart summarizes the amount of land area within each VRLI category within the Existing DGA:

Table 3: Vacant Residential Land Inventory Breakdown by Category

DGA Category		Land Area (ha)
Registered		75
Draft Approved		365
Pending		115
Potential	Within Secondary Plan	220
Development	Outside of Secondary Plan	30

Source: City of Hamilton VRLI, year end 2019

4.2 OTHER DESIGNATED RESIDENTIAL SUPPLY OPPORTUNITIES:

The VRLI considers lands which are vacant and designated for residential development. Other sites within the Existing DGA which do not meet this criteria, but which represent designated supply opportunities, include:

- Large parcels currently developed with a single detached dwelling, but which offer potential for severance and future additional residential development; and,

- Land assembly opportunities for parcels currently developed with single detached dwellings with opportunity to be developed at a higher density.

Development opportunities of the lands noted above are identified by City staff through a review of the Existing DGA, but do not form part of the City’s VRLI because they are not vacant. However, because these lands are designated for residential development (i.e. “Neighbourhoods” on Schedule E-1 of the UHOP and / or within a Secondary Plan residential designation), they represent planned residential supply opportunities and should be considered as part of the planned density calculation. An assessment of realistic potential of these sites to develop by 2051 was undertaken, and only sites which did not require consolidation with other properties in order to develop were assumed as realistic development opportunities within the planning horizon.

5.0 CALCULATING POPULATION AND EMPLOYMENT POTENTIAL

5.1 POPULATION

Calculating the development potential, and ultimately the planned density, of the DGA requires calculating the unit potential across each of the subsets noted above. The development potential of the Registered, Draft Approved, and Pending development categories (VRLI) is straightforward, and is based on the unit potential of the Registered / Draft Approved / Pending Plan of Subdivision applications. Units are translated into population based on the following assumptions regarding persons per unit for new or existing units in the DGA as per the chart below:

Unit Type	PPU – New Units (VRLI)	PPU – Existing Units ²
Single / Semi	3.405	3.44
Row	2.437	2.50
Apartment	1.663	1.64

The density calculation of the Potential Development category of the VRLI (within and outside of a Secondary Plan boundary), and the Other Designated Residential Supply Opportunities outside of the VRLI, requires greater discussion, being based on certain development assumptions, as follows:

- Within a Secondary Plan generally assume development will occur at the maximum density permitted by the Secondary Plan land use designation. (Secondary Plan land use categories permit development at a density range, eg. 20 to 40 units per hectare.)

² The PPU factors for existing units are based on average Household Size by Unit Type by Period of Construction from Statistics Canada for the 10-year period 2006-2016. The resulting population figures are checked for consistency with available Census information at the Dissemination Area (DA) level for total occupied housing units, population and average persons per unit in the DGA and adjusted upwards to include non-household population and the Census net undercoverage (“the undercount”) in accordance with the Growth Plan Schedule 3 forecast definitions. The PPUs are applicable to the DGA only, and not city-wide. The PPU factors for new units are based on the City’s 2019 D.C Background study.

For this exercise, the maximum density permission was assumed for the majority of sites, with the exception of certain situations where the existing surrounding development was at a lower density and it was assumed that future development would be at a similar density.

- For properties that are subject to a development application (eg. Zoning By-law Amendment or Site Plan), the proposed development concept was used to inform density assumptions.
- Review of existing OP and zoning designations to obtain guidance. Note that some DGA lands within this category remain under remnant Agricultural zoning, despite being within the urban boundary, and therefore cannot be used to guide future development assumptions.
- If applicable, Neighbourhood Plans provide guidance on future development potential.
- Review of surrounding land uses to determine appropriate development potential taking into account matters such as transition and compatibility.

These assumptions are used to assign potential unit and population totals to the Potential Development lands within the VRLI, and the Other Designated Residential Supply Opportunity areas. The population assumptions use the same Persons per Unit factors discussed above.

5.2 IDENTIFYING OPPORTUNITIES TO INCREASE THE PLANNED DENSITY OF EXISTING DGA

City staff conducted a review of the designated residential supply opportunities across the Existing DGA to identify opportunities to increase the planned density (unit potential). The review focussed on lands within the Potential Development Category of the VRLI, and lands within the Other Designated Residential Supply Opportunities category. The context of the review was to consider opportunities to increase the planned density of the Existing DGA to the planning horizon of 2051.

It is assumed that opportunities to increase the planned density of the Registered, Draft Approved and Pending category lands are low. While it is recognized that unit potential of the Pending Category may change from what is currently proposed, it is nonetheless assumed that any changes in planned density from what is submitted on the development application would be fairly minor, and would reflect the need to redesign the proposed development to account for technical requirements arising during the development review process. A significant change in planned density is not likely or anticipated.

The following categories were reviewed by staff :

- The Potential Development category of the VRLI represents only 11% of the net Residential DGA, or 250 hectares. Of this 250 ha, almost 90% is located inside a Secondary Plan boundary. These lands offer some opportunity to plan for increased density, through processing of future development applications that may contemplate a density increase above that permitted in the approved Secondary Plan. In this regard, staff updated the assumptions within the VRLI to reflect higher densities in certain areas, reflective of recent developments or applications in the vicinity, and the Growth Plan and UHOP planning direction to plan for compact form with a range of housing options.
- The remaining lands of the Potential Development (VRLI) category are located outside of a Secondary Plan boundary. These lands offer the greatest opportunity and flexibility in future planning, but also represent the smallest subset of land area. Similar to above, staff reviewed these lands to update the density assumptions in the VRLI, based on updated zoning, surrounding development, and recent development applications on the subject lands or in the vicinity.

In reviewing these Potential Development sites, staff also considered locations on the edges of neighbourhoods, particularly at the intersection of arterial roads, where an increase in density may be appropriate in accordance with UHOP policy direction. These areas offer an important opportunity to plan for ‘missing middle’ housing, which refers to a need to provide a greater range of medium density housing forms within neighbourhoods, which may include townhouses of various forms of low-rise apartments.

- In addition to the update to the VRLI, staff also undertook a review of the Other Designated Residential Supply Opportunities. Opportunity areas were identified, taking into account recent development trends in the surrounding area, new or updated zoning, and development enquires or consultations on the lands.

5.3 EMPLOYMENT

The number of jobs calculated for the existing DGA is based on the City’s employment survey information adjusted to align with the known 2016 Census employment total. The number of jobs in the new DGA is based on the build-out of existing vacant Commercial lands (at 60 jobs per net ha) and Institutional lands (at 38 jobs per net ha). “Work at home” employment is estimated at 3% of the total DGA population. The breakdown is as follows:

- Employment survey (adjusted) – 5,100 jobs;
- Work at home (3% of total population) – 1,740 jobs;
- Vacant commercial potential – 5,180 jobs;
- Vacant institutional potential – 1,250 jobs.

5.4 PLANNED DENSITY OF EXISTING DGA

The calculation of the planned DGA density is based on a combination of existing population and jobs, plus population in the designated residential supply (VRLI and Other Designated Supply Opportunities), plus potential job growth.

Based on the supply information in the VRLI, combined with the Other Residential Supply Opportunities, the planned density across the Existing DGA as of 2019 is 60 pjh.

Table 4: Summary of Planned Density of Existing DGA

Category			Units	Population	Jobs	PJH
Population						
Fully or Partially built			18,900	55,500		
Registered (VRLI)			3,500	8,100		
Draft Approved (VRLI)			6,250	17,400		
Pending (VRLI)			2,600	5,900		
Potential Development (VRLI)	Within Secondary Plan		7,400	18,200		
	Outside Secondary Plan		600	1,500		
Other Designated Supply Opportunities		Residential	1,000	2,570		
Jobs					13,270	
Total (Persons + Jobs per hectare)						60

Source: City of Hamilton – PPU’s based on chart for existing and new units – page 10

This planned density represents an increase from the last previously reported calculation in 2017 of 56 pjh. This current review is based on the most up-to-date information, including some revisions to the GIS mapping, land area measurements and capacity calculations (updated PPU’s and employment density factors) since the last reported calculation. The key differences are noted herein, and generally result in a moderately higher density for the current DGA than had been previously estimated.

6.0 CHALLENGES AND OPPORTUNITIES

While staff have determined that opportunity does remain within the City’s Existing DGA to plan to achieve a 60 pjh target, achieving this target requires planning for a more compact form, alternative land uses and, in some cases, increased densities. The following considerations need to be recognized:

- As noted above, only a small percentage of the Existing DGA is true vacant greenfield land. The vacant greenfield lands represent an opportunity to plan for increased densities, subject to good planning and servicing availability. Other opportunities will require land assembly or redevelopment, which could be more challenging.
- Planning for increased density in the Existing DGA could be challenging in light of the potential for neighbourhood opposition if a new development is proposed at a higher density than surrounding lands. While the planned density takes into account neighbourhood compatibility when making assumptions about future development potential, the possibility of neighbourhood concern remains if density increases are proposed (eg. townhouses instead of single detached dwellings);
- The planned density calculation assumes that future development will proceed at the higher end of the Secondary Plan density range (if applicable). Recent history shows that new developments are not consistently being proposed at the higher end of the range. Ensuring future development meets the higher density requirement will require education and cooperation from the development community, staff and council.
- The planned density calculation assumes that some parcels currently developed with a single detached dwelling will be redeveloped at a higher density over the long term. There is no guarantee redevelopment will occur, and it is entirely dependent on the will of the landowner.

As noted above, planning to achieve 60 pjh represents an optimistic view of the density of future development (i.e. assumption that development will proceed at densities greater than the minimum requirements). To support the City’s achievement of the 60 pjh target over the long term, staff recommend the following actions:

- Supportive residential zoning – the City is currently working on the final stage of its new comprehensive zoning by-law, which is the residential zones. Some of the zoning by-laws do not contemplate the full range of housing types or the associated development standards which are common in new greenfield developments today, including maisonettes, stacked townhouses, and rear lane townhouses, and developments with multiple forms in one block. This causes a delay in approvals process as site specific zoning must be created for new developments. By establishing new residential zoning that contemplates a variety of medium and high density residential forms, and allows for flexibility in design and regulations, developers will be encouraged and facilitated in planning for higher density developments in their greenfield communities.
- Education on medium and high density housing – this approach is important for the public and the development community. Providing education on the variety of housing forms and typologies that contribute to higher density can facilitate development other than the standard low rise and townhouse development which is typical of new communities. Education on the benefits of higher densities could help address

neighbourhood and political opposition. The City has already embarked on this initiative through a series of open houses held in the fall of 2018 entitled *Imagining New Communities*, which provided information to the public and council on higher density community design.

9.0 CONCLUSION

It is appropriate for the City to plan to achieve 60 pjh as a target for Existing DGA density. This target will require new greenfield developments to be approved at a higher density than the historical norm, and will require cooperation and support of staff, developers, Council and the public.

APPENDIX "A"

