

3.0

Taking Stock

The following is a collection of research highlights to help better understand the Apartment Tower housing resource within the Greater Golden Horseshoe.



3.1 1,925 Apartment Towers

Apartment Towers are a Major Component of the GGH's Housing Stock

Overview

There are 1,925 Apartment Towers in the Greater Golden Horseshoe (GGH). Collectively, these towers contain 383,838 units, representing 13 per cent of all households in the GGH. That means about one in every seven and a half households in the GGH are in an Apartment Tower. In the Greater Toronto and Hamilton Area (GTHA), this ratio increases to one in every six households.

A significant number of Ontarians live in Apartment Towers. If a conservative metric of 2.6 people per household is applied, it can be estimated that Apartment Towers house approximately one million people, or roughly 12 per cent of the total GGH population. However, this number may be higher, according to recent studies* indicating that Apartment Tower units often house large numbers of individuals that are unaccounted for in Census data.

Apartment Buildings Five to Seven Storeys

In addition to the 1,925 Apartment Towers under study that are eight storeys and over, there are an additional 1,155 apartment buildings from the study era between five and seven storeys, which are considered high-rise by Statistics Canada. These buildings have been excluded from the larger study. However, these buildings exhibit many of the characteristics of the Apartment Towers under study, including distribution and socio-economic attributes. These buildings contain an additional 112,753 units. Taking into account all apartment buildings from the study era five storeys and over, the GGH contains a total of 3,080 apartment buildings and 496,591 apartment units, or 17 per cent of all housing units in the GGH. Further information related to apartment buildings five to seven storeys can be found in the Technical Appendices.

The Apartment Towers under study are concrete frame residential buildings, eight storeys or over, built between 1945 and 1984.



01



02

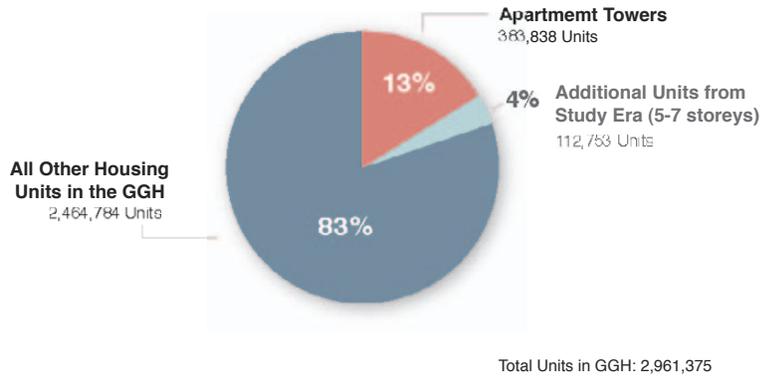
Images

- 01) Eight storeys and over: Eighteen storey Apartment Tower, Former Borough of Scarborough
- 02) Five to seven storeys: Seven storey apartment building, Mississauga
- 03) Single Family Homes
- 04) Contemporary Condominiums

Note

*United Way Toronto High-rise Apartment Livability Study, (Forthcoming, 2010).

Apartment Towers Related to Total Housing Stock in the GGH



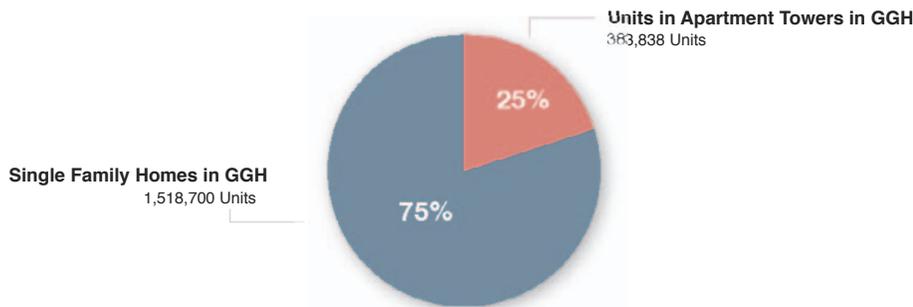
03



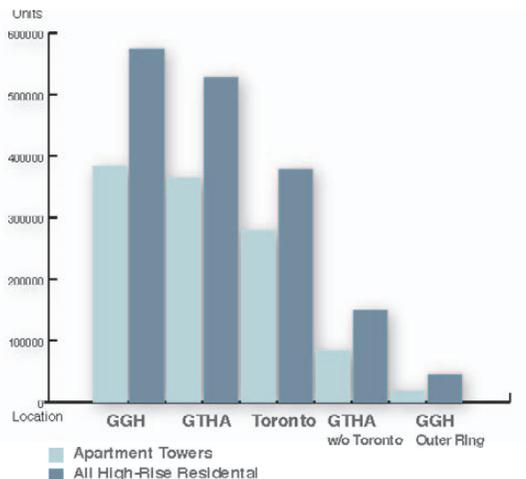
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04

Units in Apartment Towers Compared to Single Family Homes in the GGH



Apartment Towers in Relation to All High-Rise Housing in the GGH



Relation to Other Housing Types:

SINGLE FAMILY HOME:

The number of households in Apartment Towers is equivalent to 25 per cent of the households in the GGH living in single-family homes. Within the GTHA this number increases to 40 per cent, meaning there is an Apartment Tower unit for every 2.5 single-family homes.

ALL HIGH-RISE HOUSING

Apartment Towers represent the majority of multiple residential housing in the region. They consist of 67 per cent of all high-rise residential buildings in the GGH as defined by Statistics Canada (multiple housing five storeys and above). Within the GTHA this number increases to 69 per cent, and in Toronto it is 74 per cent.

These findings are based on data from the 2006 Census by Statistics Canada, and from Canada Mortgage and Housing Corporation from 2006 to 2009.



3.2 Location

Apartment Towers are Found Throughout the GGH

Overview

Apartment Towers can be found throughout the GGH. Over two-thirds of upper and single-tier municipalities in the GGH have Apartment Towers as part of their housing mix.

The majority of Apartment Towers, 62 per cent, are found in Toronto. Twenty-nine per cent are found in the GTHA without Toronto, and nine per cent of Apartment Towers are found in the municipalities that make up the Outer Ring of the GGH.

The majority of the Apartment Towers in the GGH are found outside of downtowns, in the inner and outer suburbs. Only 14 per cent of Apartment Towers are located in urban growth centres, which are typically the historic downtowns and city centres of the region’s larger cities.

Regional Comparison

Within the North American context, this volume and distribution of Apartment Towers is unique, contrasting the typical condition of locating high-rise housing in city centres. The database Emporis provides a global listing of building of all types 12 storeys and over within metropolitan regions comparable in scale to the GTHA. According to the analysis undertaken for this report, 66 per cent of the GGH’s Apartment Towers are 12 or more storeys,* with 95 per cent of these in the GTHA. In North America, this is higher than the total number of buildings 12 storeys and over of all types, including office, than any other Metropolitan region other than New York.

Metropolitan Region	High-rise Buildings Over 12 Storeys (all types)
New York	5,568
Greater Toronto and Hamilton Area	2,321 (1,205 Apartment Towers 12 Storeys or more)
Greater Chicago	1,111
Greater Vancouver	614

Data from Emporis, Spring 2010

Tower Distribution

GTHA

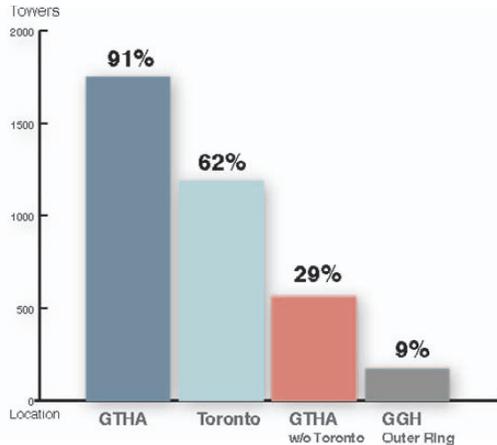
Within the GTHA, the majority of Apartment Towers are found in Toronto (68 per cent), with large concentrations outside of Toronto found in Peel (13 per cent), and Hamilton (11 per cent), as well as Halton (five per cent), Durham (two per cent), and York (one per cent).

OUTER RING OF THE GGH

Of the nine per cent of the total stock located in the GGH’s Outer Ring, the largest concentrations are found in the Region of Waterloo (39 per cent) and Niagara Region (23 per cent), with additional towers found in Peterborough County (13 per cent), Guelph (12 per cent), Simcoe County (seven per cent), Brant County (six per cent), Northumberland County (one per cent) and Dufferin County (< one per cent).

Location	Apartment Towers
Greater Golden Horseshoe	1,925
Greater Toronto and Hamilton Area	1,752
Toronto	1,189
GTHA without Toronto	563
Outer Ring of GGH	173

Apartment Towers by Location



01

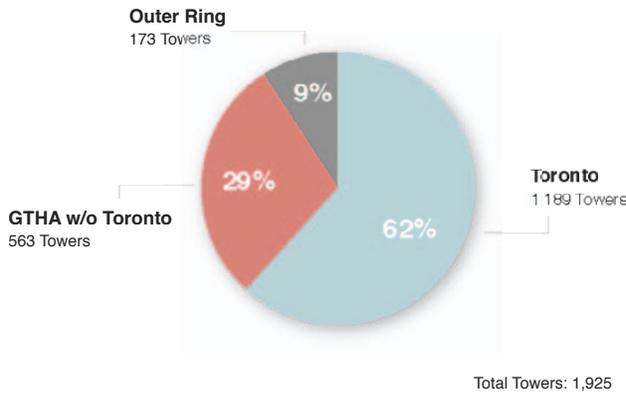


02



03

Location of Apartment Towers in GGH



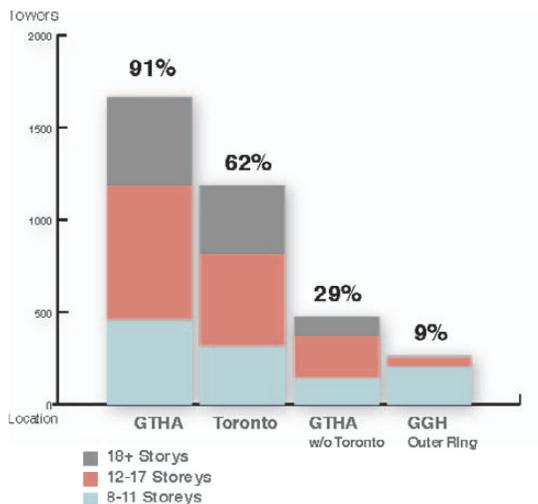
Images

- 01) Towers 18 or more Storeys in the GGH
- 02) Towers 12-17 Storeys in the GGH
- 03) Towers 8-11 Storeys in the GGH

*Tower Size and Distribution

Towers, 8 Storeys +:	1,925
Towers, 12 Storeys +:	1,267
Towers, 18 Storeys +:	488

Apartment Towers by Number of Storeys



The height of Apartment Towers under study range from eight to over 50 storeys. Larger towers (18 storeys or more) are generally located in the GTHA, with the largest concentrations found in Toronto, Mississauga and Hamilton. In the Outer Ring, the majority of towers are below 12 storeys; however, towers 18 storeys or higher can be found in Kitchener-Waterloo and Port Hope.

Inventory

Location of Apartment Towers in the GGH

Location: **COUNTY OF SIMCOE**

Towers: **3**

Units: **370**

Site Area (Ha): **2.09**

Location: **CITY OF ORILLIA**

Towers: **1**

Units: **110**

Site Area (Ha): **2.8**

Location: **CITY OF BARRIE**

Towers: **9**

Units: **1,146**

Site Area (Ha): **8.38**

Location: **COUNTY OF DUFFERIN**

Towers: **1**

Units: **164**

Site Area (Ha): **0.9**

Location: **REGION OF YORK**

Towers: **22**

Units: **3,639**

Site Area (Ha): **24.91**

Location: **CITY OF GUELPH**

Towers: **20**

Units: **1,135**

Site Area (Ha): **17.1**

Location: **REGION OF WATERLOO**

Towers: **67**

Units: **7,307**

Site Area (Ha): **65.62**

Location: **CITY OF BRANTFORD**

Towers: **10**

Units: **1,030**

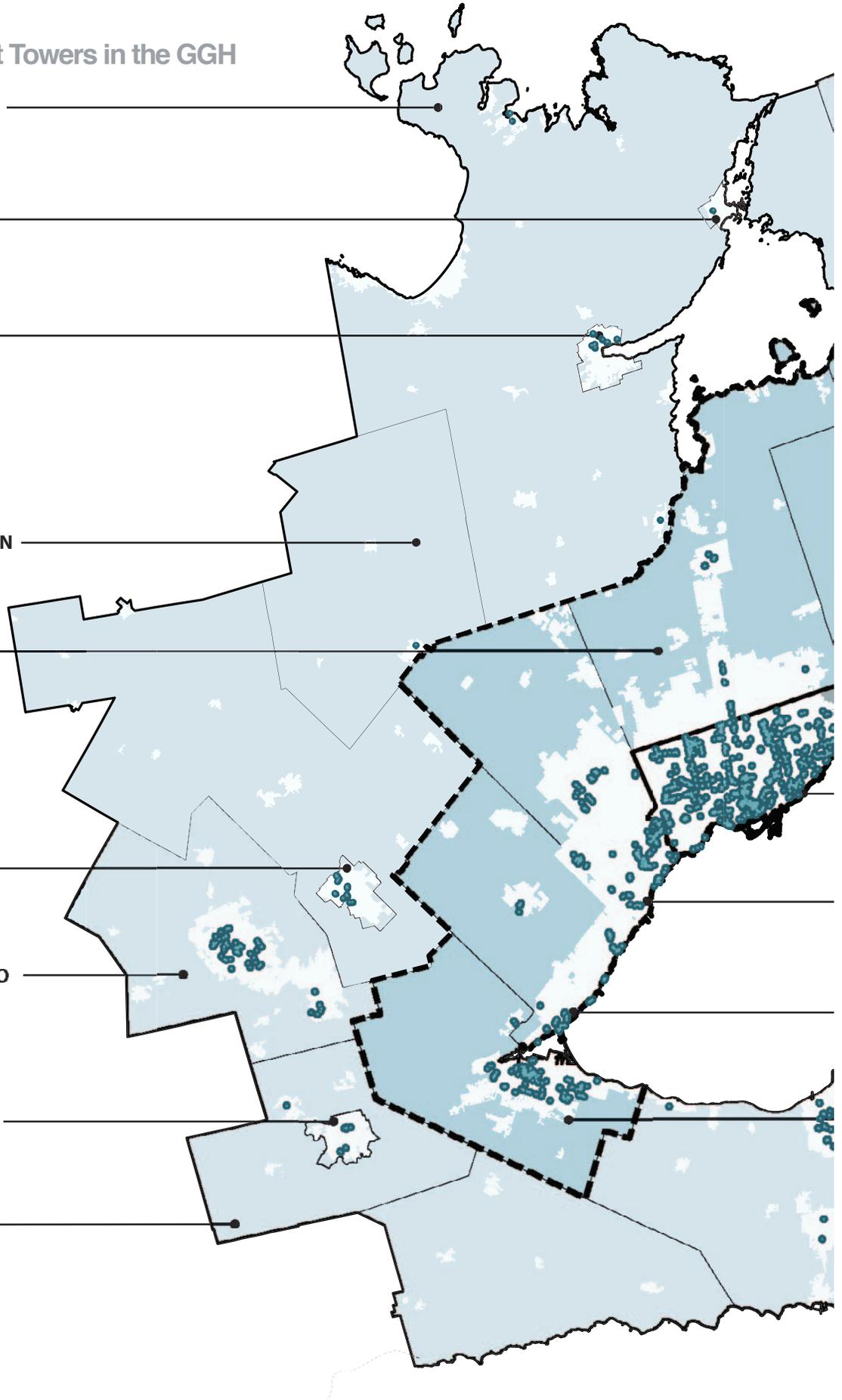
Site Area (Ha): **8.87**

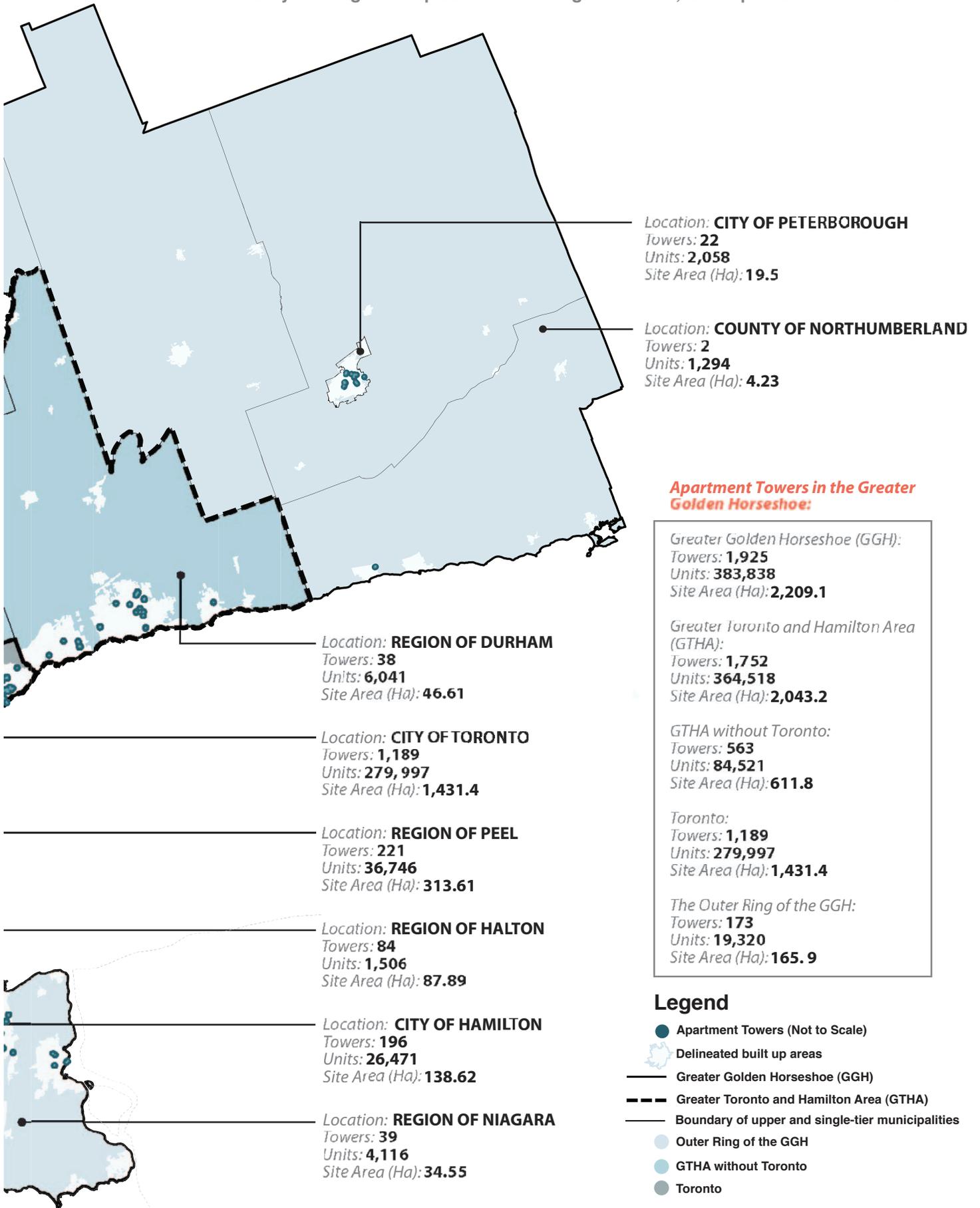
Location: **COUNTY OF BRANT**

Towers: **1**

Units: **104**

Site Area (Ha): **1.8**





Apartment Towers in the Greater Golden Horseshoe:

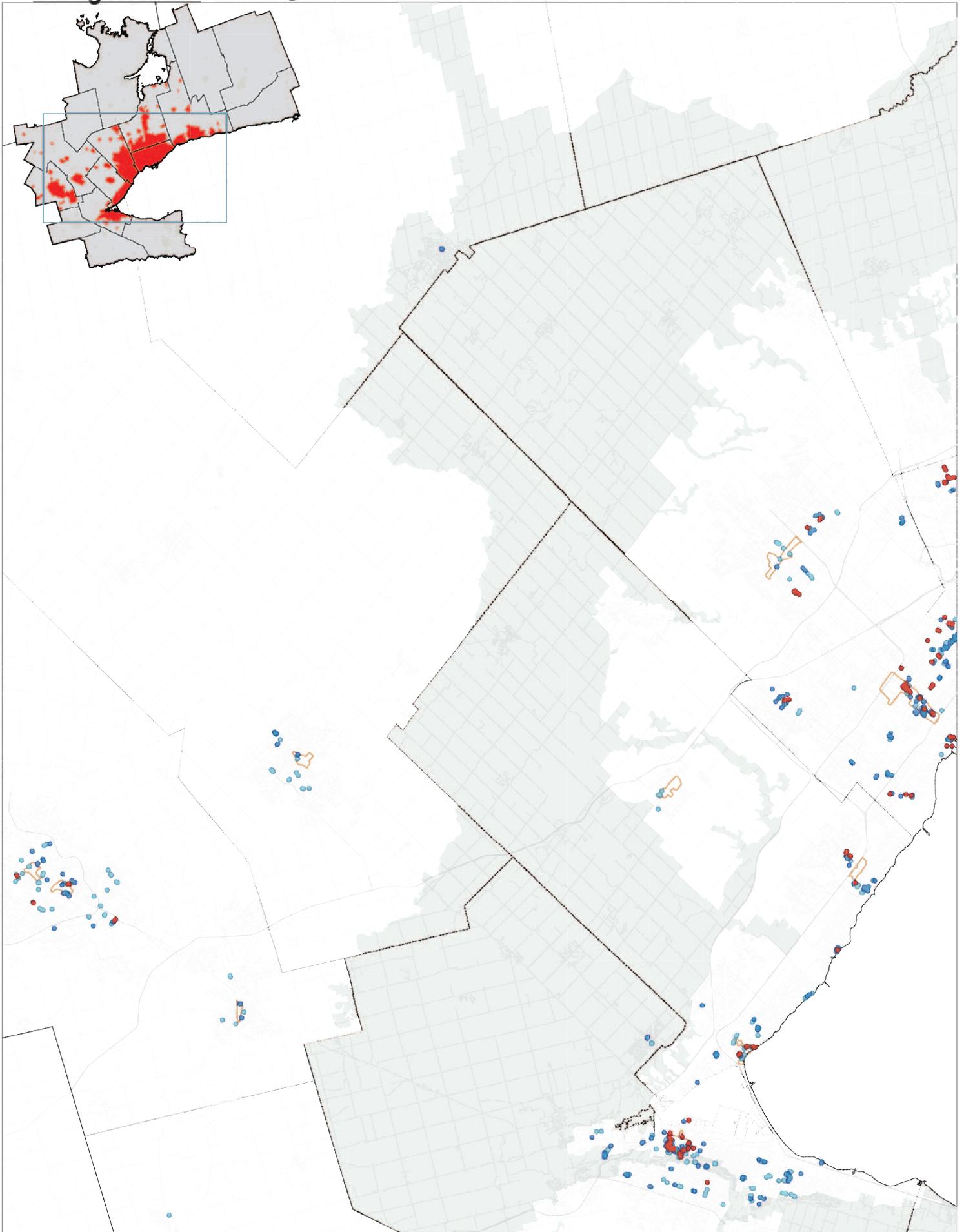
Greater Golden Horseshoe (GGH):	Towers: 1,925	Units: 383,838	Site Area (Ha): 2,209.1
Greater Toronto and Hamilton Area (GTHA):	Towers: 1,752	Units: 364,518	Site Area (Ha): 2,043.2
GTHA without Toronto:	Towers: 563	Units: 84,521	Site Area (Ha): 611.8
Toronto:	Towers: 1,189	Units: 279,997	Site Area (Ha): 1,431.4
The Outer Ring of the GGH:	Towers: 173	Units: 19,320	Site Area (Ha): 165.9

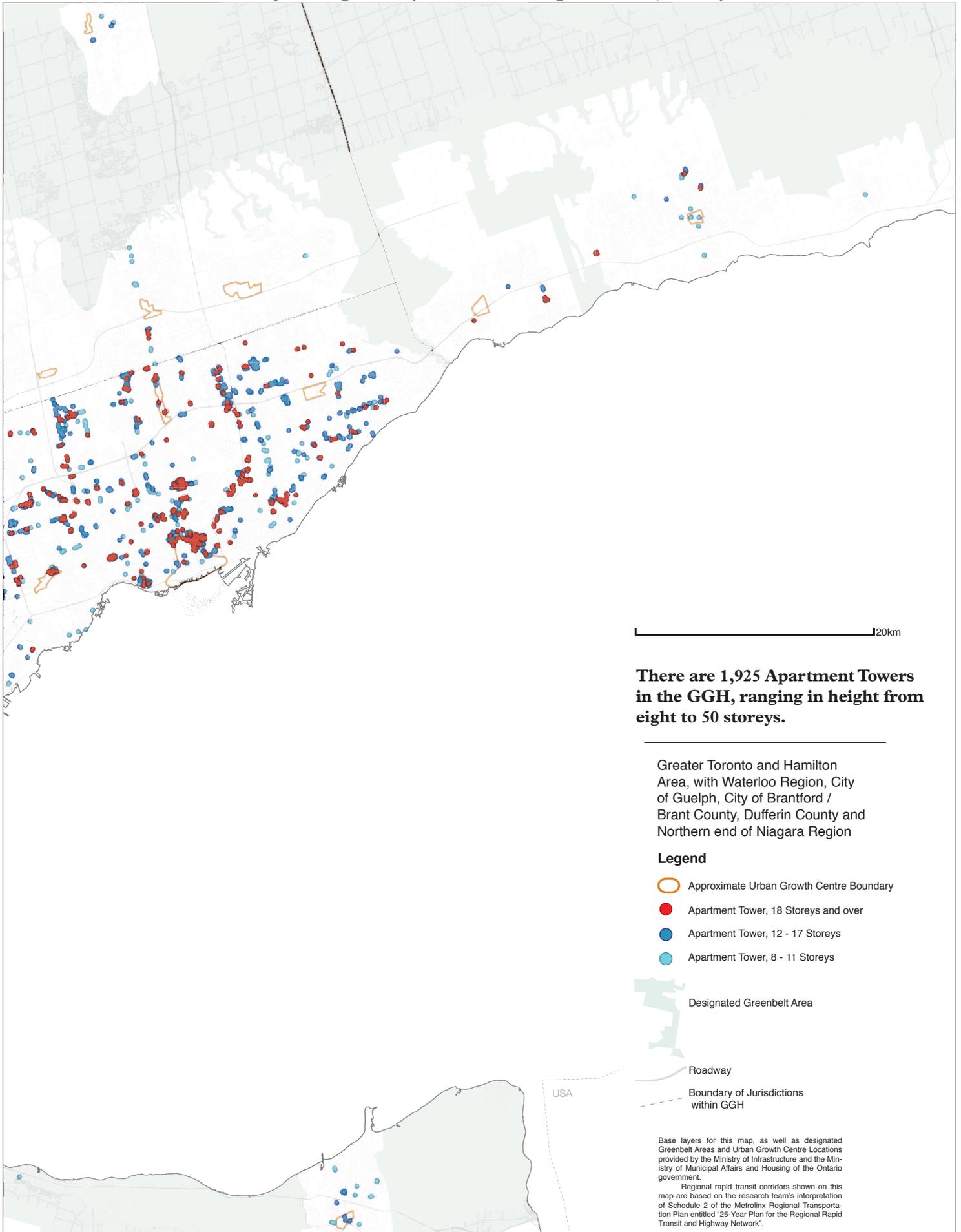
Legend

- Apartment Towers (Not to Scale)
- 🗺 Delineated built up areas
- Greater Golden Horseshoe (GGH)
- Greater Toronto and Hamilton Area (GTHA)
- Boundary of upper and single-tier municipalities
- Outer Ring of the GGH
- GTHA without Toronto
- Toronto

Base layers for this map, as well as designated Greenbelt Areas and Urban Growth Centre Locations provided by the Ministry of Infrastructure and the Ministry of Municipal Affairs and Housing of the Ontario government.

Taking Stock 3.2 Tower Neighbourhood Renewal in the Greater Golden Horseshoe





20km

There are 1,925 Apartment Towers in the GGH, ranging in height from eight to 50 storeys.

Greater Toronto and Hamilton Area, with Waterloo Region, City of Guelph, City of Brantford / Brant County, Dufferin County and Northern end of Niagara Region

Legend

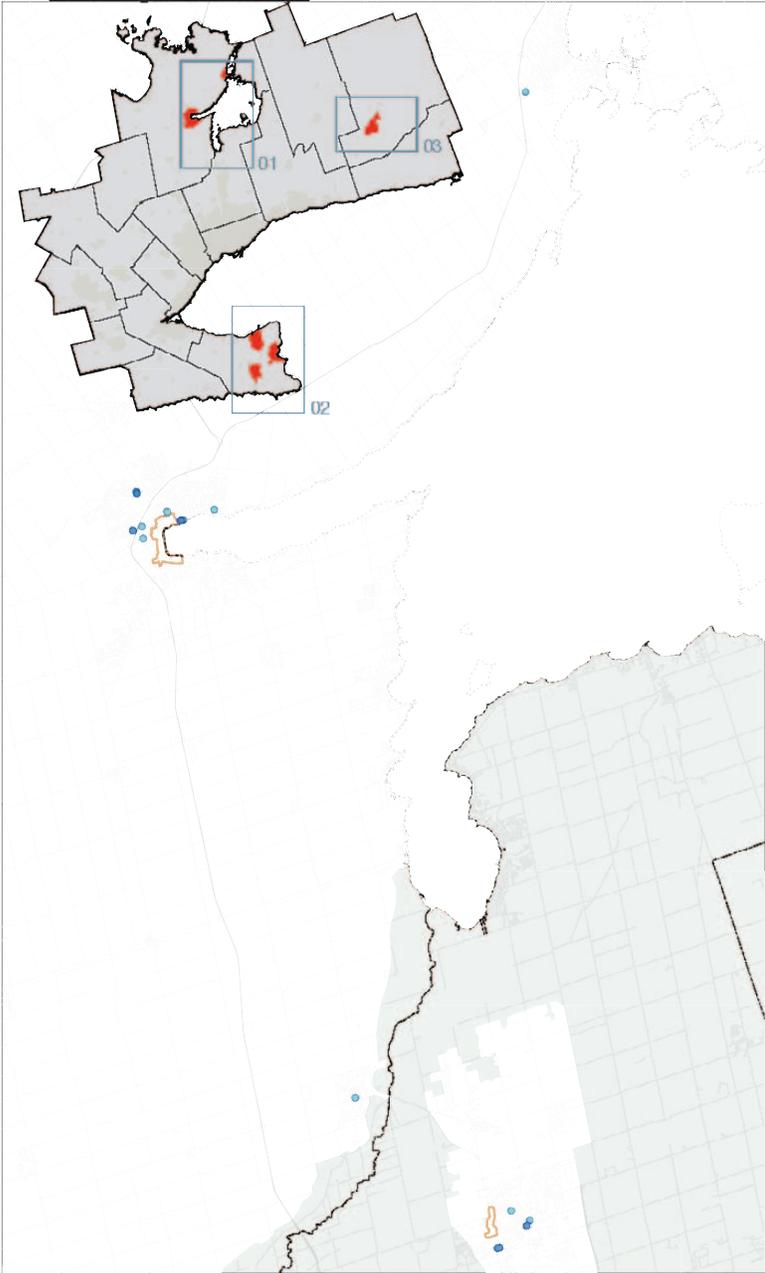
-  Approximate Urban Growth Centre Boundary
-  Apartment Tower, 18 Storeys and over
-  Apartment Tower, 12 - 17 Storeys
-  Apartment Tower, 8 - 11 Storeys

-  Designated Greenbelt Area
-  Roadway
-  Boundary of Jurisdictions within GGH

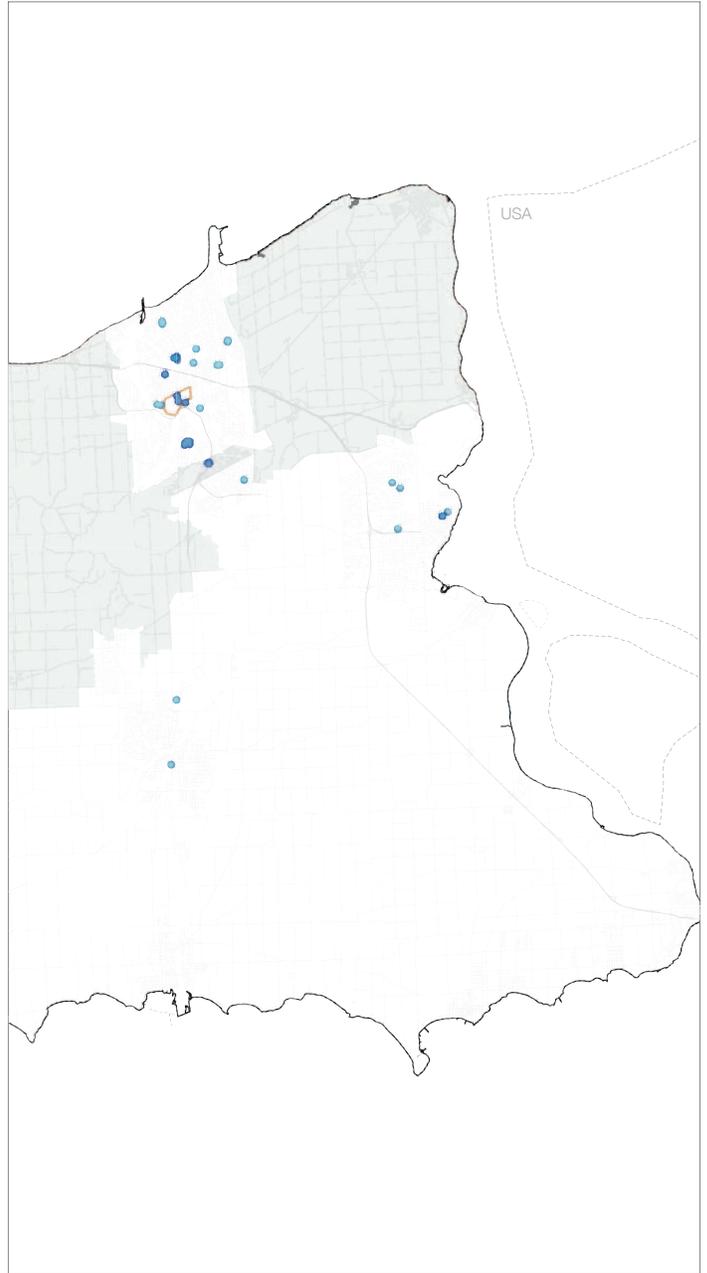
Base layers for this map, as well as designated Greenbelt Areas and Urban Growth Centre Locations provided by the Ministry of Infrastructure and the Ministry of Municipal Affairs and Housing of the Ontario government.

Regional rapid transit corridors shown on this map are based on the research team's interpretation of Schedule 2 of the Metrolinx Regional Transportation Plan entitled "25-Year Plan for the Regional Rapid Transit and Highway Network".

Taking Stock 3.2 Tower Neighbourhood Renewal in the Greater Golden Horseshoe

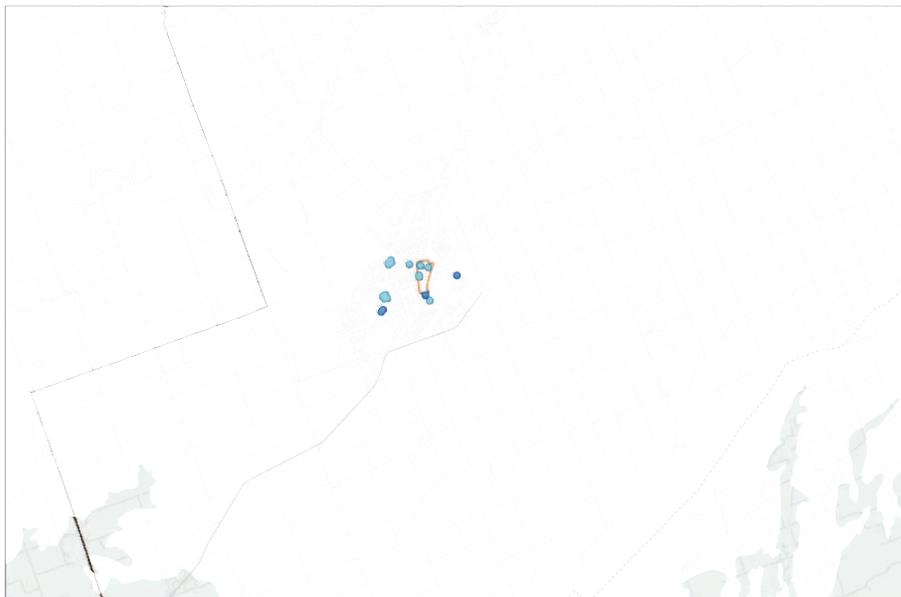


01) Simcoe County



02) Niagara Region

20km



03) City of Peterborough

Legend

- Approximate Urban Growth Centre Boundary
- Apartment Tower, 18 Storeys and over
- Apartment Tower, 12 - 17 Storeys
- Apartment Tower, 8 - 11 Storeys

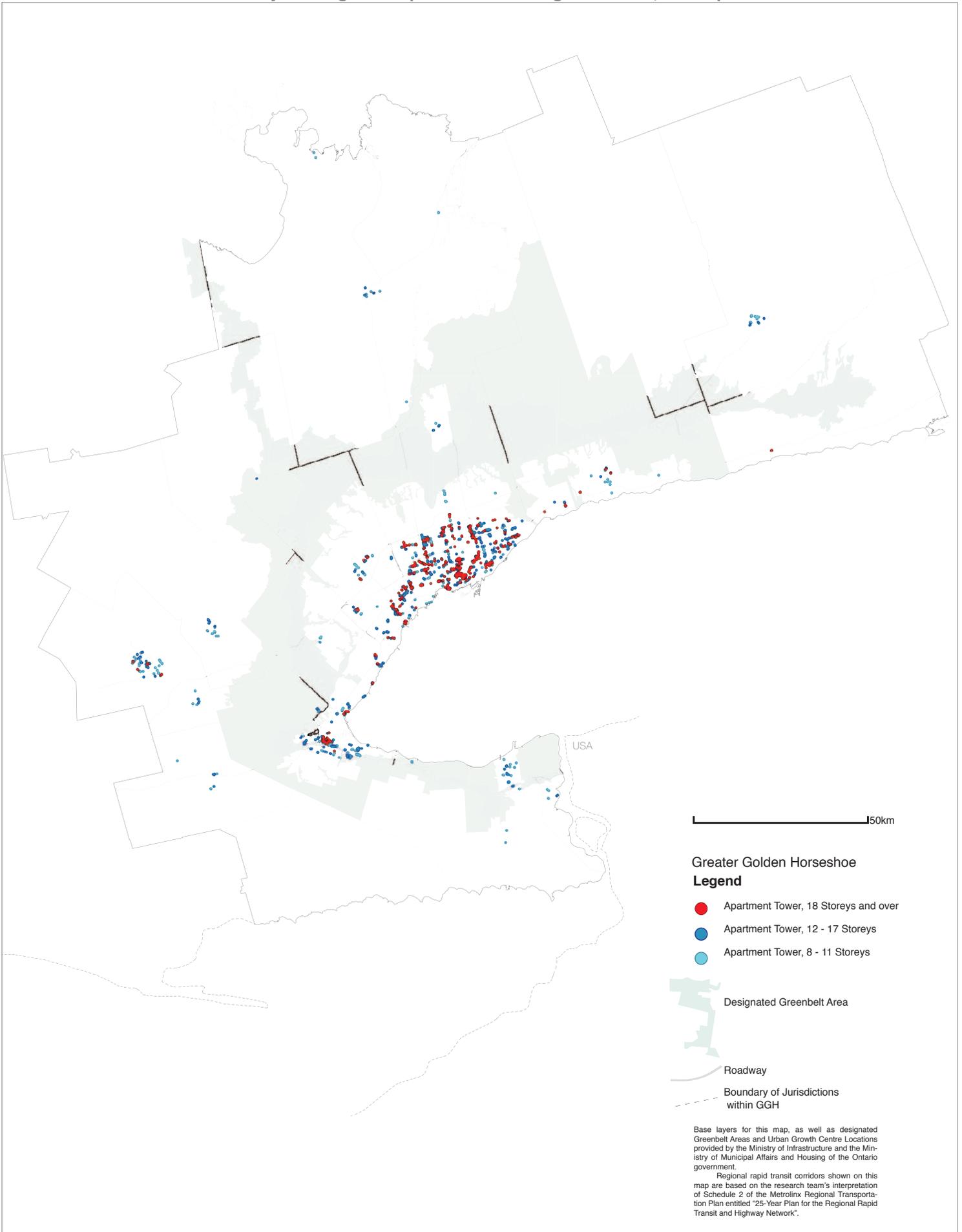
Designated Greenbelt Area

Roadway

Boundary of Jurisdictions within GGH

Base layers for this map, as well as designated Greenbelt Areas and Urban Growth Centre Locations provided by the Ministry of Energy and Infrastructure and the Ministry of Municipal Affairs and Housing of the Ontario government.

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3.3 Clusters

Apartment Towers Tend to be Clustered

Overview

Apartment Towers in the GGH are generally found in clusters (i.e. within 150 metres of another tower). In the GGH, 89 per cent of all Apartment Towers are found in clusters of two or more, and 62 per cent are found in clusters of five or more. Only 11 per cent are found in isolation.

This phenomenon is a legacy of the planning approach that characterized Apartment Towers, which often encouraged that towers be built in clusters, forming Apartment Tower Neighbourhoods. The more sophisticated clusters were designed as satellite centres, coordinated with transit, employment and retail. An example is Toronto’s Thorncliffe Park, begun in the 1950s as the region’s first planned suburban ‘new town’ focussed around Apartment Towers. Though the majority of Apartment Tower Neighbourhoods did not undergo the same detailed master planning process of these earlier projects, clustering of towers became a common trend throughout the development period.

Clustering is most prevalent in the GTHA without Toronto, where only six per cent of towers are found in isolation. In the Outer Ring, however, Apartment Towers are far more dispersed, with 50 per cent of Apartment Towers found outside of clusters.*

Large Clusters

With over 62 per cent of Apartment Towers in clusters of five or more, large apartment clusters are a ubiquitous form throughout the region. This is most pronounced in the GTHA, where 66 per cent of Apartment Towers (1156 Towers) are found in 94 large clusters. These large clusters create significant concentrations of population. Of these large clusters, over 78 per cent contain more than 1,000 households, and 40 per cent contain more than 2,000 households. The largest of these Apartment Tower clusters contain more than 10,000 households. These clusters create a decentralized pattern of higher-density housing unique to North America.

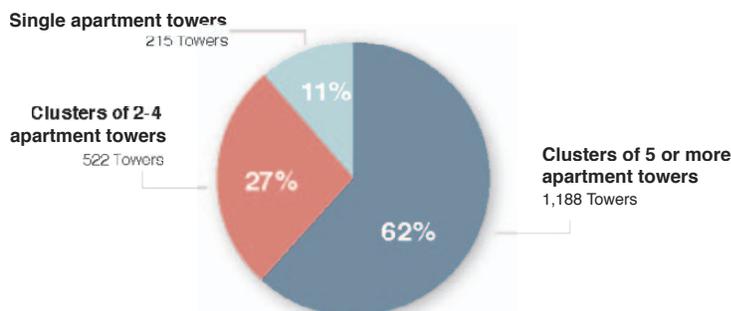
Density

Apartment clusters often contain higher densities. Densities taken at the neighbourhood scale provide an accurate measure of the average neighbourhood, or district gross density, yet generally suppresses concentrations of higher densities within larger areas. As a result, the actual ‘lived’ densities of Apartment Tower Neighbourhoods are not often adequately represented. Taking into account tower clusters and their immediate vicinity, the net densities of groupings of apartment properties, excluding adjacent land uses, range from 150 to 350 people per hectare (pph), and in some areas have been found to reach 500 pph and higher.

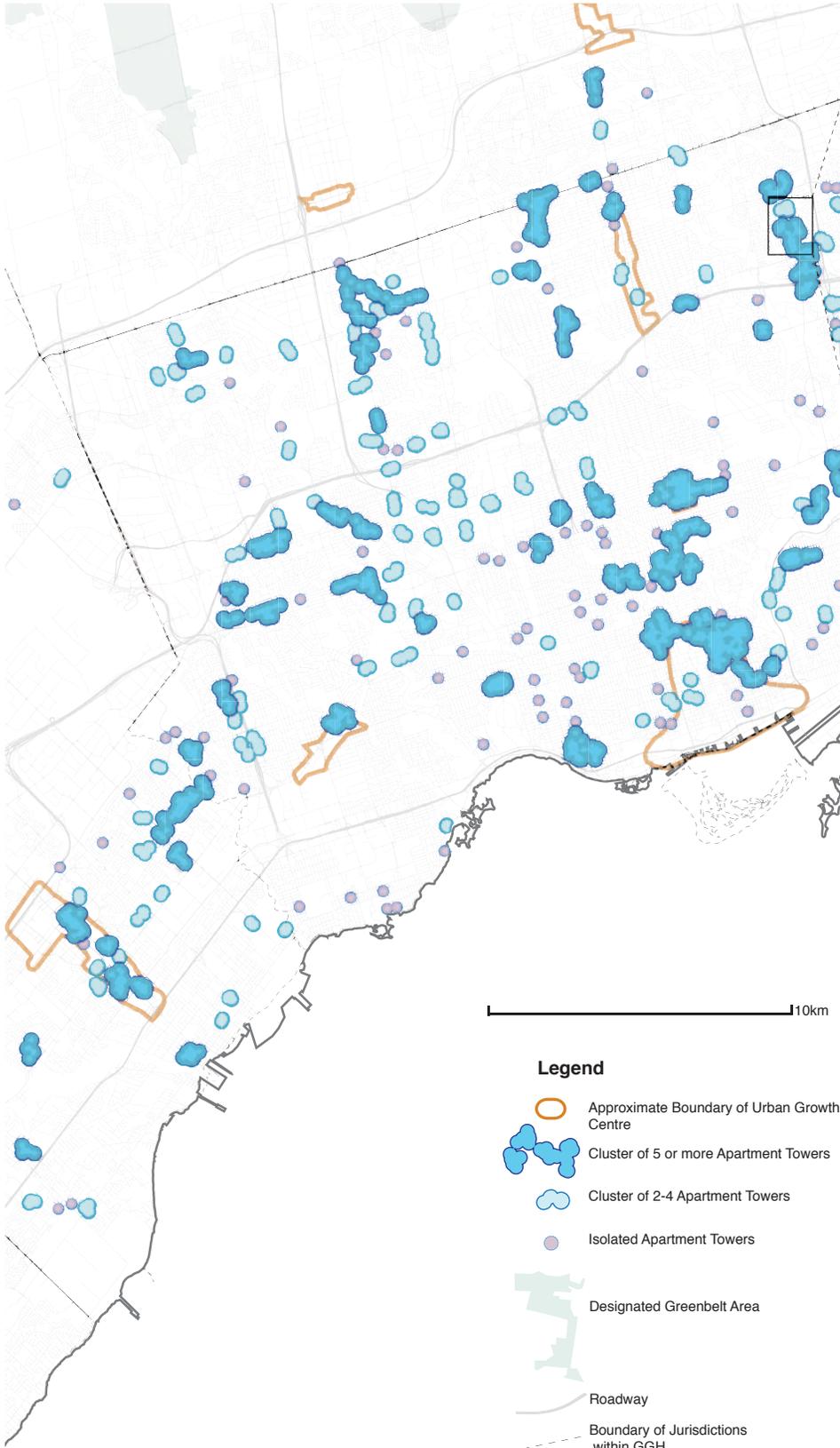
Notes

*The factors accounting for the unique patterns of distribution between the GTHA and Outer Ring is a recommended area of future study.

Percentage of Apartment Towers in Clusters



Total Towers in GGH: 1,925

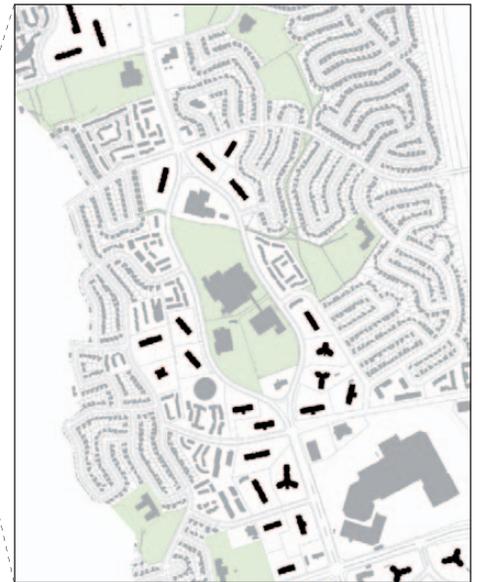


01

Legend

- Approximate Boundary of Urban Growth Centre
- Cluster of 5 or more Apartment Towers
- Cluster of 2-4 Apartment Towers
- Isolated Apartment Towers
- Designated Greenbelt Area
- Roadway
- Boundary of Jurisdictions within GGH

Base layers for this map, as well as designated Greenbelt Areas and Urban Growth Centre Locations provided by the Ministry of Infrastructure and the Ministry of Municipal Affairs and Housing of the Ontario government.
Regional rapid transit corridors shown on this map are based on the research team's interpretation of Schedule 2 of the Metrolinx Regional Transportation Plan entitled "25-Year Plan for the Regional Rapid Transit and Highway Network".



02

Mapping Clusters

The map detail to the left (image 01), illustrates the concentration of large clusters in the west of Toronto and the east of Peel Region. A full sequence of maps can be seen in the following pages.

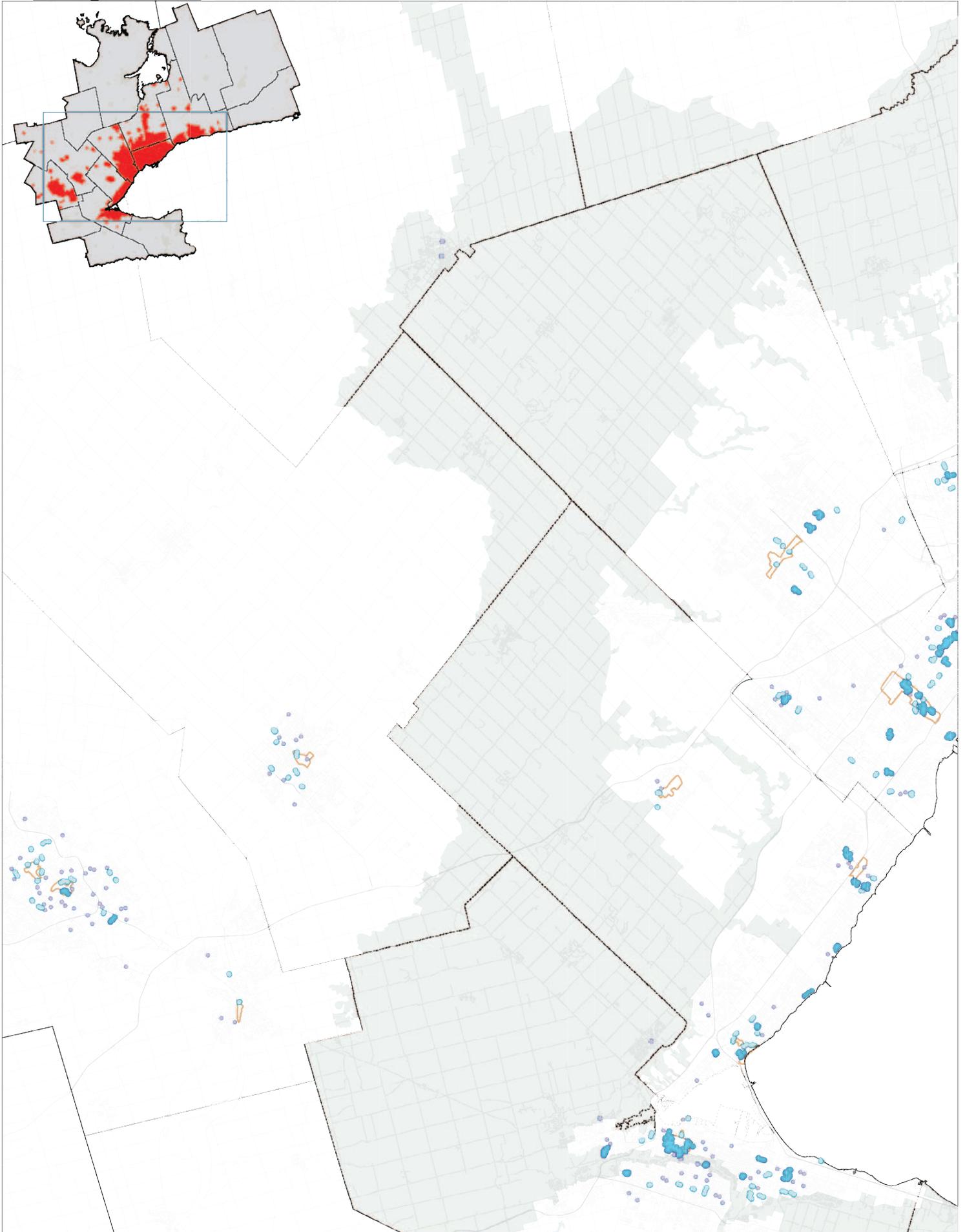
The Peanut, (Image 02), at Don Mills Rd., between Sheppard and Finch Aves., in the former Borough of North York, is an example of a master planned cluster, as discussed in Section 2.1

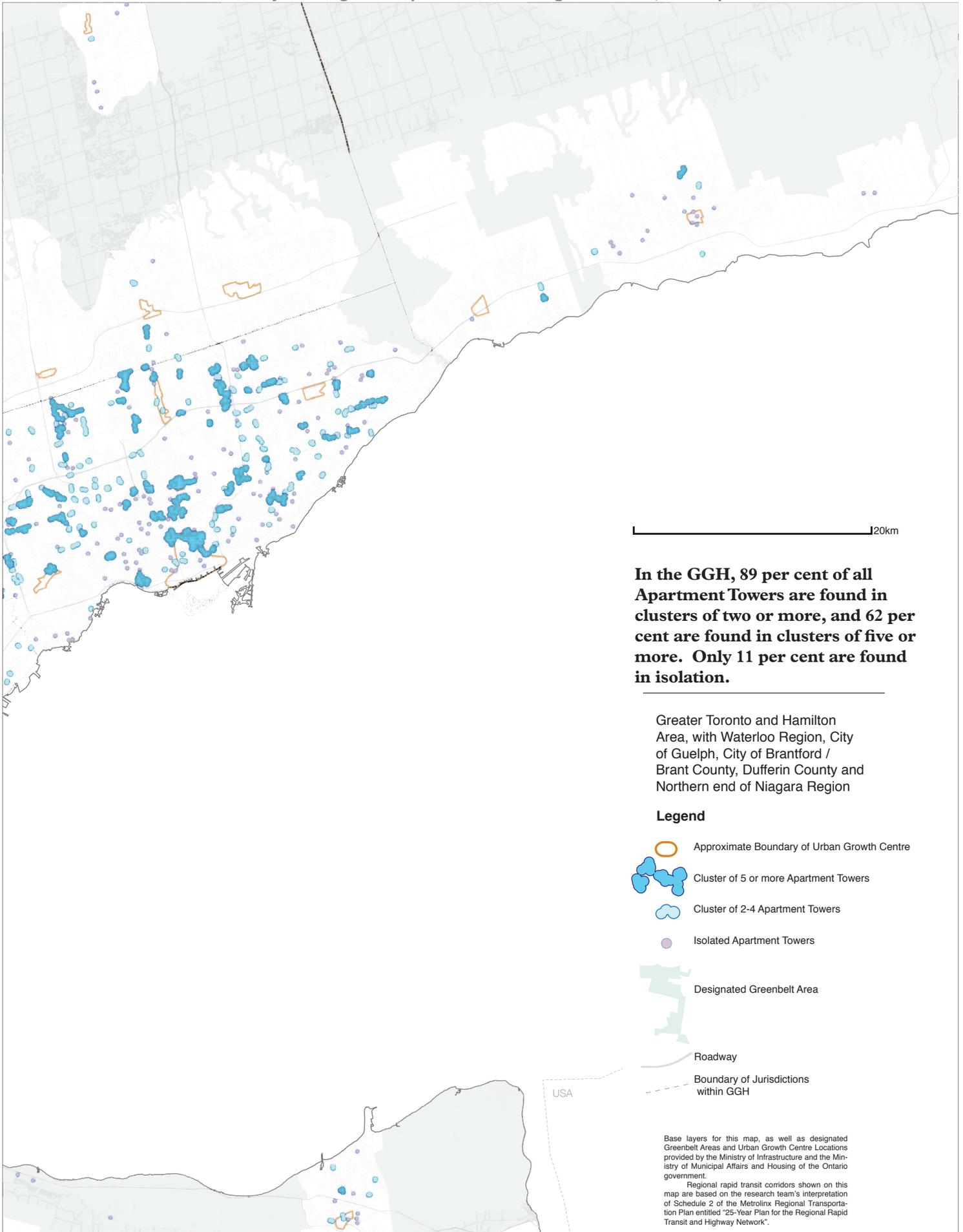
Cluster Examples

The following is a selection of clusters found throughout the region, ranging in size and geography. This random sampling is organized from smallest to largest collection of units.

- Ritson Rd, Oshawa:**
8 Towers, 1,076 units
- Kingsway Dr., Kitchener:**
5 Towers, 1,464 units
- Oakville Trafalgar:**
9 Towers, 1,975 units
- Port Credit, Mississauga:**
15 Towers, 1,802 units
- Centennial and Barton, Hamilton:**
15 Towers, 2,529 units
- Bramalea, Brampton:**
10 Towers, 3,541 units
- Bloor and Dixie, Mississauga:**
26 Towers, 3,350 units
- Burnhamthorp and Hurontario, Mississauga:**
16 Towers, 5,009 units
- Dixon and Kipling, Toronto:**
15 Tower, 6,105 units
- Bathurst and Steeles, Toronto:**
31 Towers, 6,950 units
- Don Mills Peanut, Toronto:**
31 Towers, 7,067 units
- Crescent Town, Toronto:**
26 Towers, 10,352 units
- Downtown Hamilton:**
83 Towers, 12,404 units
- Yonge and Eglinton, Toronto:**
57 Towers, 13,219 units

Taking Stock 3.3 Tower Neighbourhood Renewal in the Greater Golden Horseshoe





20km

In the GGH, 89 per cent of all Apartment Towers are found in clusters of two or more, and 62 per cent are found in clusters of five or more. Only 11 per cent are found in isolation.

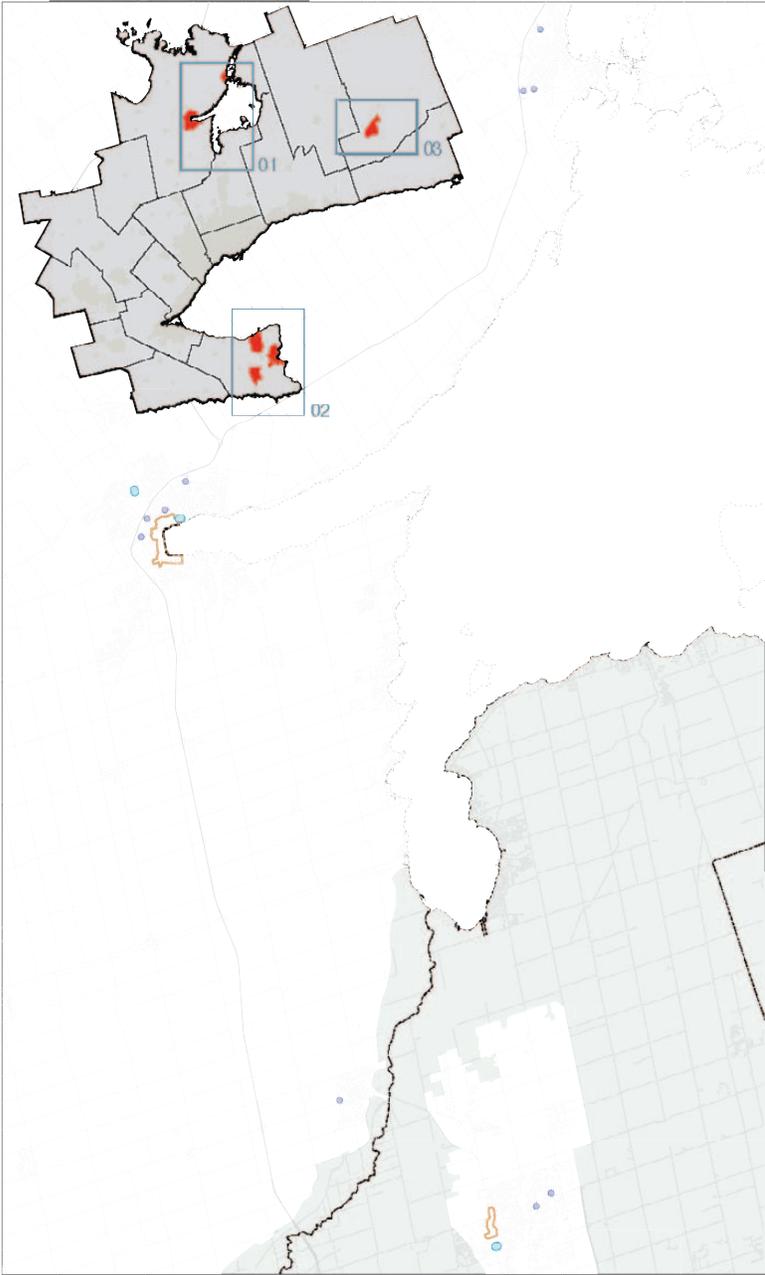
Greater Toronto and Hamilton Area, with Waterloo Region, City of Guelph, City of Brantford / Brant County, Dufferin County and Northern end of Niagara Region

Legend

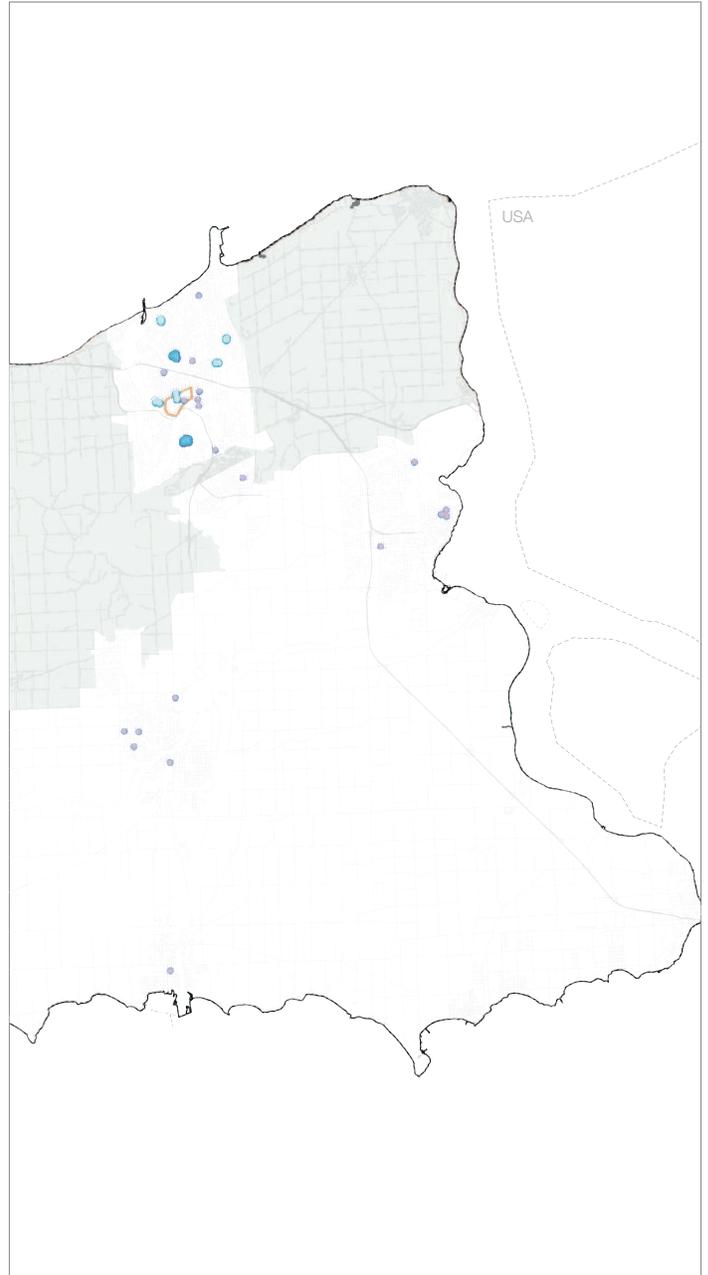
-  Approximate Boundary of Urban Growth Centre
-  Cluster of 5 or more Apartment Towers
-  Cluster of 2-4 Apartment Towers
-  Isolated Apartment Towers
-  Designated Greenbelt Area
-  Roadway
-  Boundary of Jurisdictions within GGH

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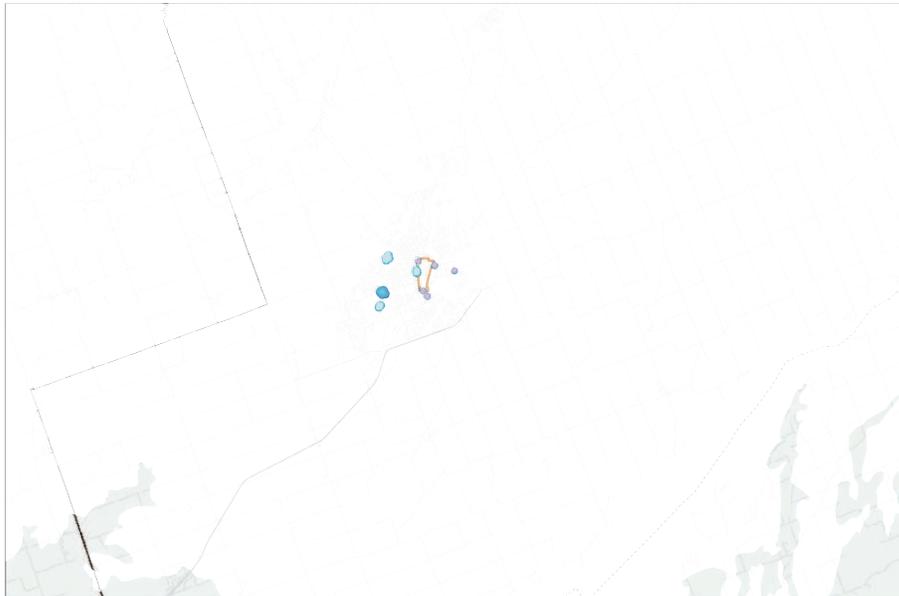
Taking Stock 3.3 Tower Neighbourhood Renewal in the Greater Golden Horseshoe



01) Simcoe County



02) Niagara Region



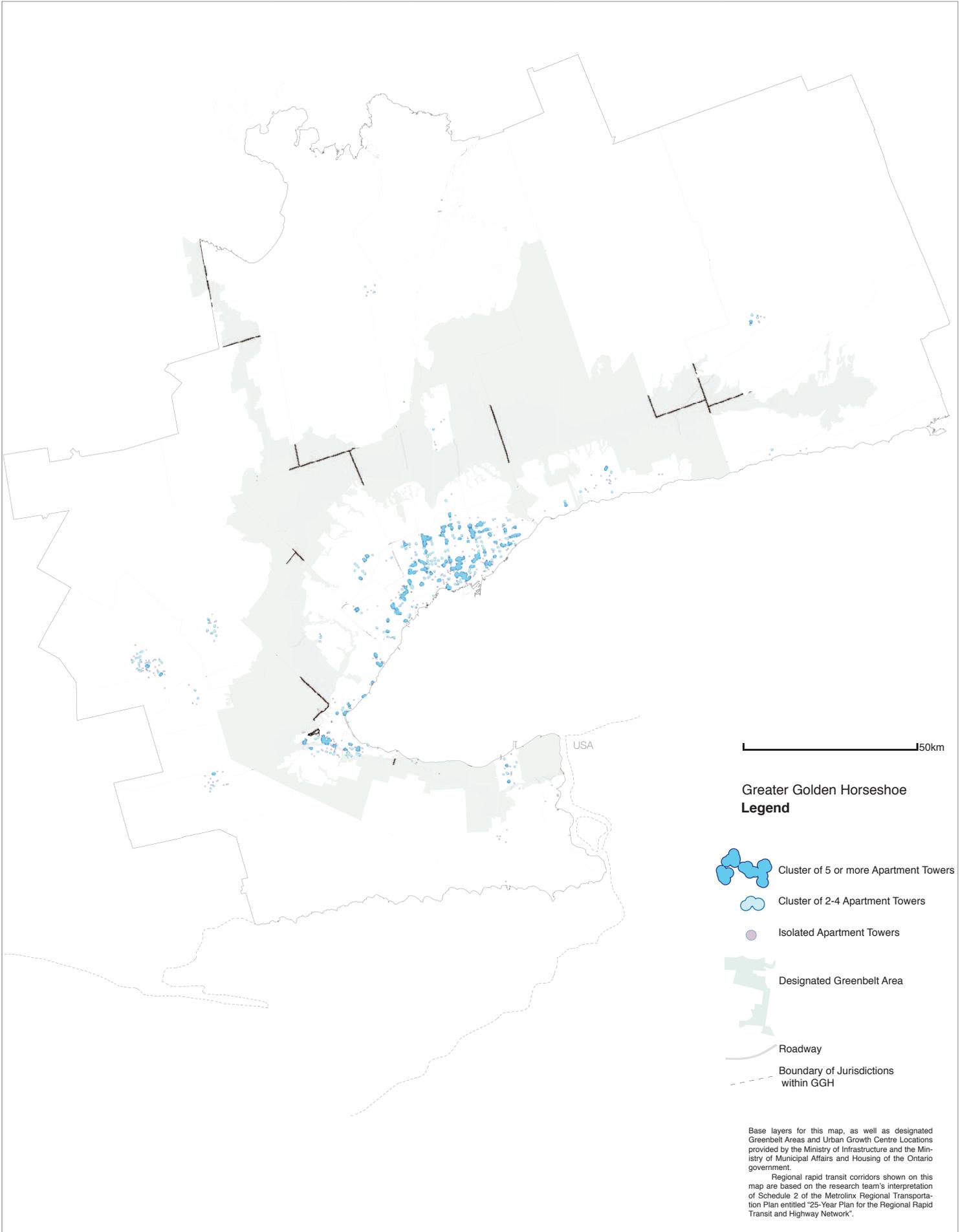
03) City of Peterborough

20km

Legend

-  Approximate Boundary of Urban Growth Centre
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-  Isolated Apartment Towers
-  Designated Greenbelt Area
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3.4 Large Properties

Apartment Towers Sit on Large Properties

Overview

Apartment Towers are generally situated on large land parcels. This is a legacy of open space ratios as high as 90 per cent, which were encouraged as part of the original site plan requirements at the time of development, to achieve the “tower-in-the-park” configuration.

The total land resource in the GGH on which Apartment Towers are situated is 2,197.5 hectares. Of this, 93 per cent is located in the GTHA.

Forty-seven per cent of Apartment Tower parcels in the GGH are greater than one hectare. With a typical building footprint of 10-20 per cent of site area, this suggests a significant amount of unbuilt space associated with these buildings. Apartment Tower properties less than 0.5 hectares in size account for only seven per cent of the buildings in the region.

The potential significance of the land area associated with Apartment Towers is even greater when the clustering phenomenon described in Section 3.3 is taken into account. Fifty-seven per cent of Apartment Tower properties share a property line with another Apartment Tower site. These adjacent parcels create large and contiguous areas of land. Collectively, these clustered Apartment Tower parcels represent approximately 1,640 hectares of land.

Parcel Distribution

GTHA

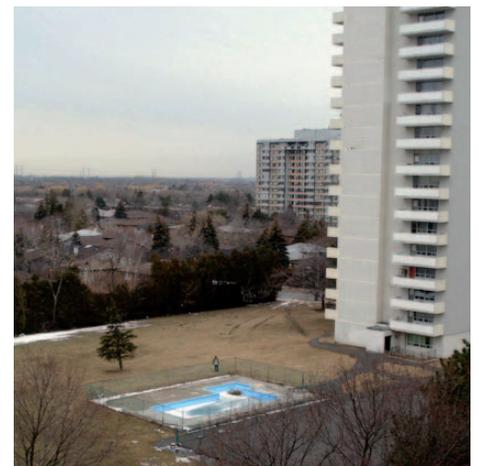
Smaller parcels tend to be located in older urban areas, where Apartment Towers were often built as infill or redevelopment. Larger parcels are generally associated with towers that were built as part of greenfield developments and master planned communities. In Hamilton for instance, 52 per cent of all Apartment Tower properties are less than 0.5 hectares, with only 22 per cent of properties larger than one hectare. The opposite trend is found in Mississauga, where 58 per cent of properties are one hectare and over, and only 15 per cent of properties are less than 0.5 hectares.

OUTER RING OF GGH

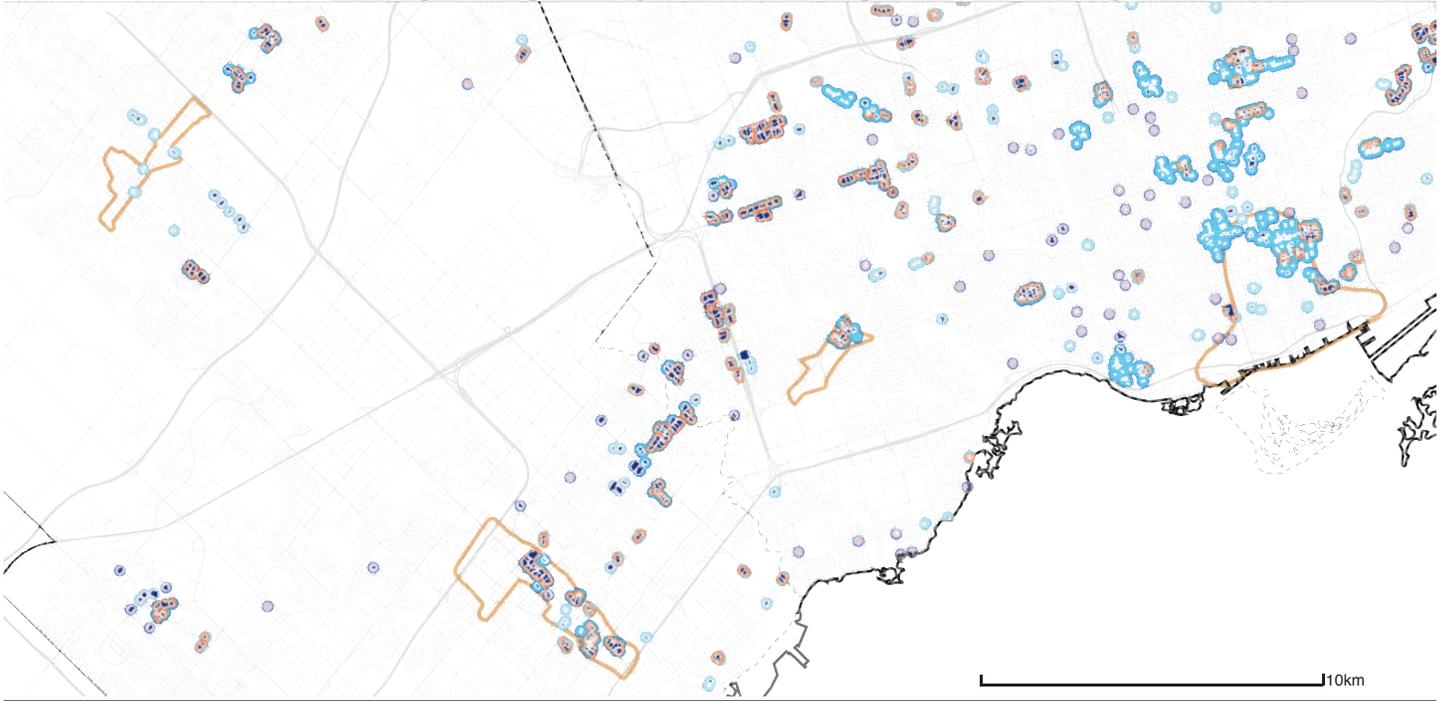
The Outer Ring follows a unique pattern from the GTHA, with the majority of properties between 0.5 and one hectare, and the trend described above with respect to property location and size less pronounced.

Images

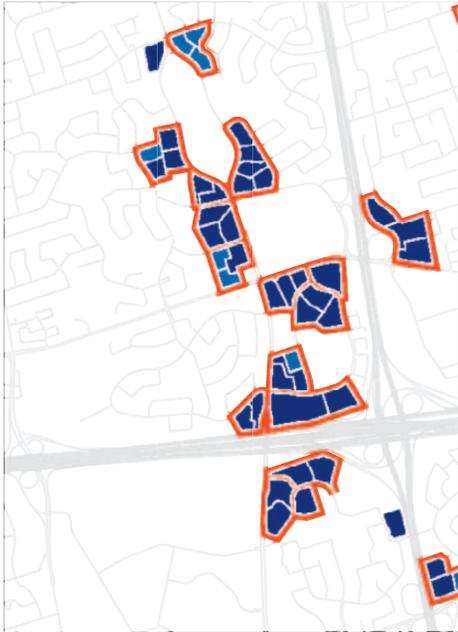
- 01) Apartment Property in the former Borough of North York
- 02) West Toronto and Peel Region
- 03) Detail, Toronto, Don Valley Parkway and Highway 401
- 04) Detail, Toronto, Downtown



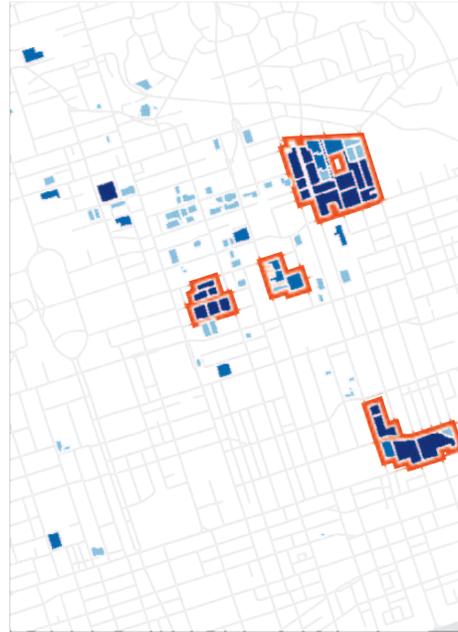
An Analysis of High-Rise Apartment Tower Neighbourhoods, Developed Between 1945 and 1984



02



03



04

Legend (for images 03, 04)

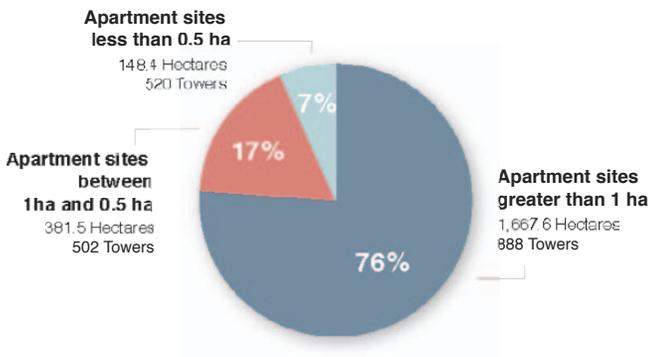
- Approximate Boundary of Urban Growth Centre
- Cluster of directly adjacent properties
- Property boundary, greater than 1 ha
- Property boundary, between 0.5 ha and 1 ha
- Property boundary, less than 0.5 ha
- Designated Greenbelt Area
- Roadway
- Boundary of Jurisdictions within GGH

Base layers for this map, as well as designated Greenbelt Areas and Urban Growth Centre Locations provided by the Ministry of Infrastructure and the Ministry of Municipal Affairs and Housing of the Ontario government.

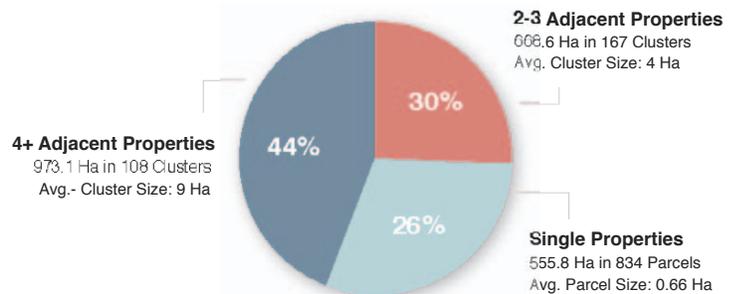
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12km

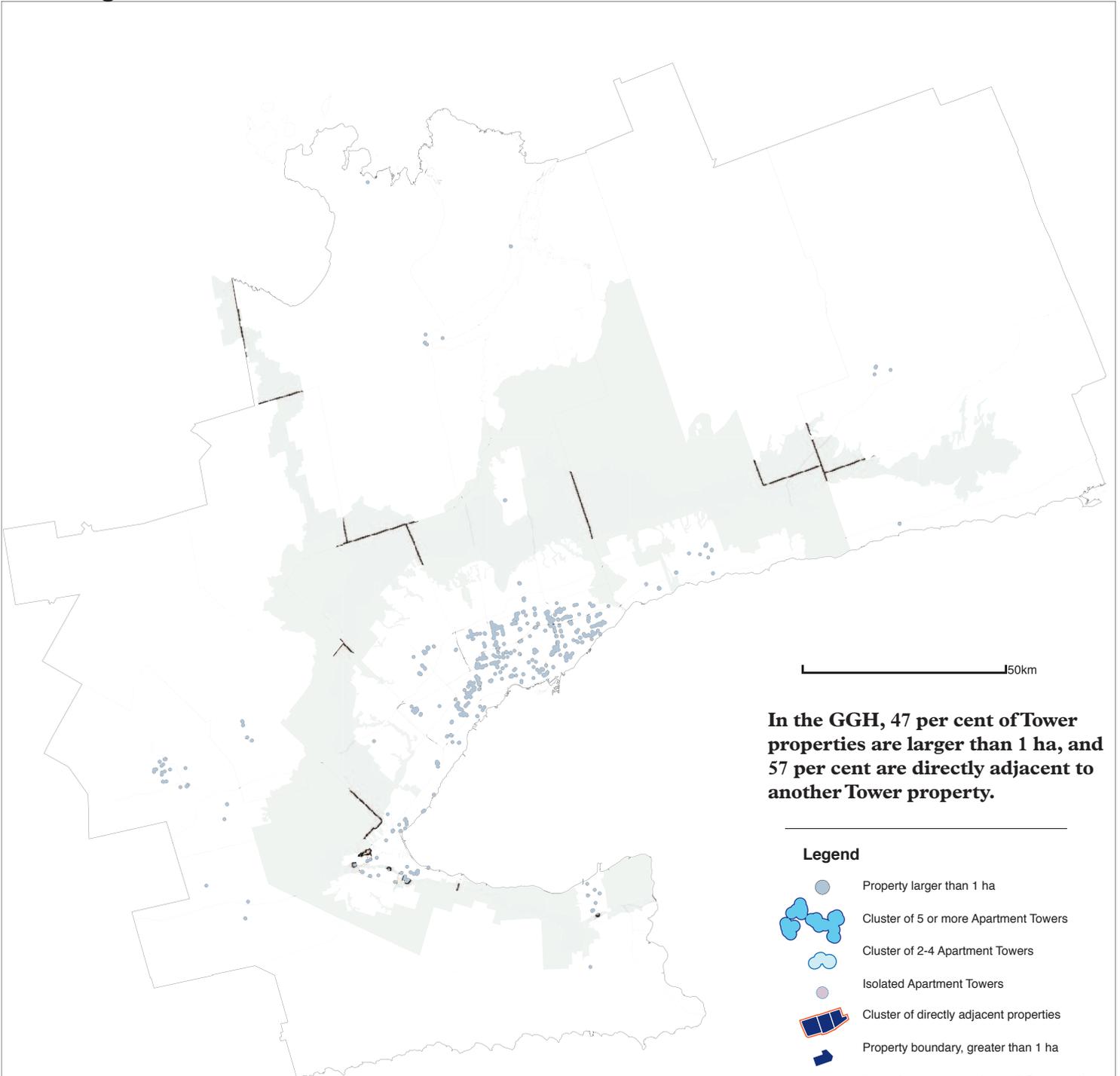
Total Hectares of Apartment Tower Sites by Property Size



Total Hectares of Apartment Tower Sites by Clusters of Adjacent Properties



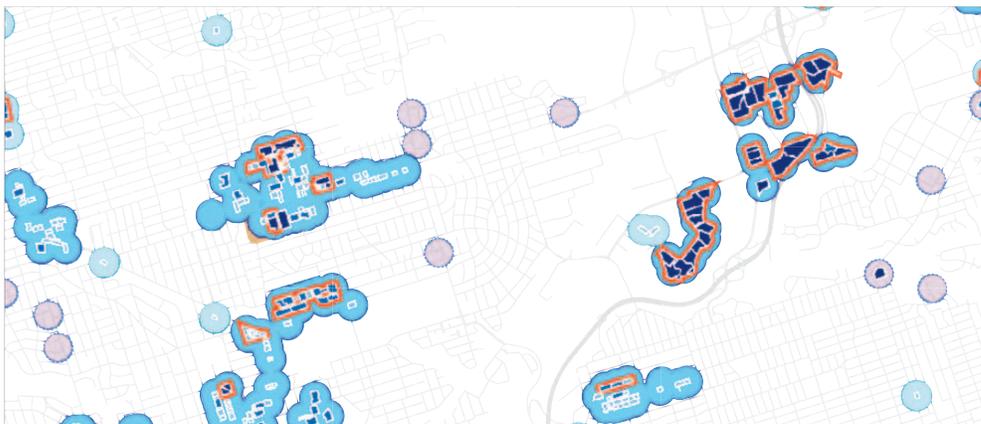
Total Hectareage of Apartment Sites: 2,197.5 ha



In the GGH, 47 per cent of Tower properties are larger than 1 ha, and 57 per cent are directly adjacent to another Tower property.

Legend

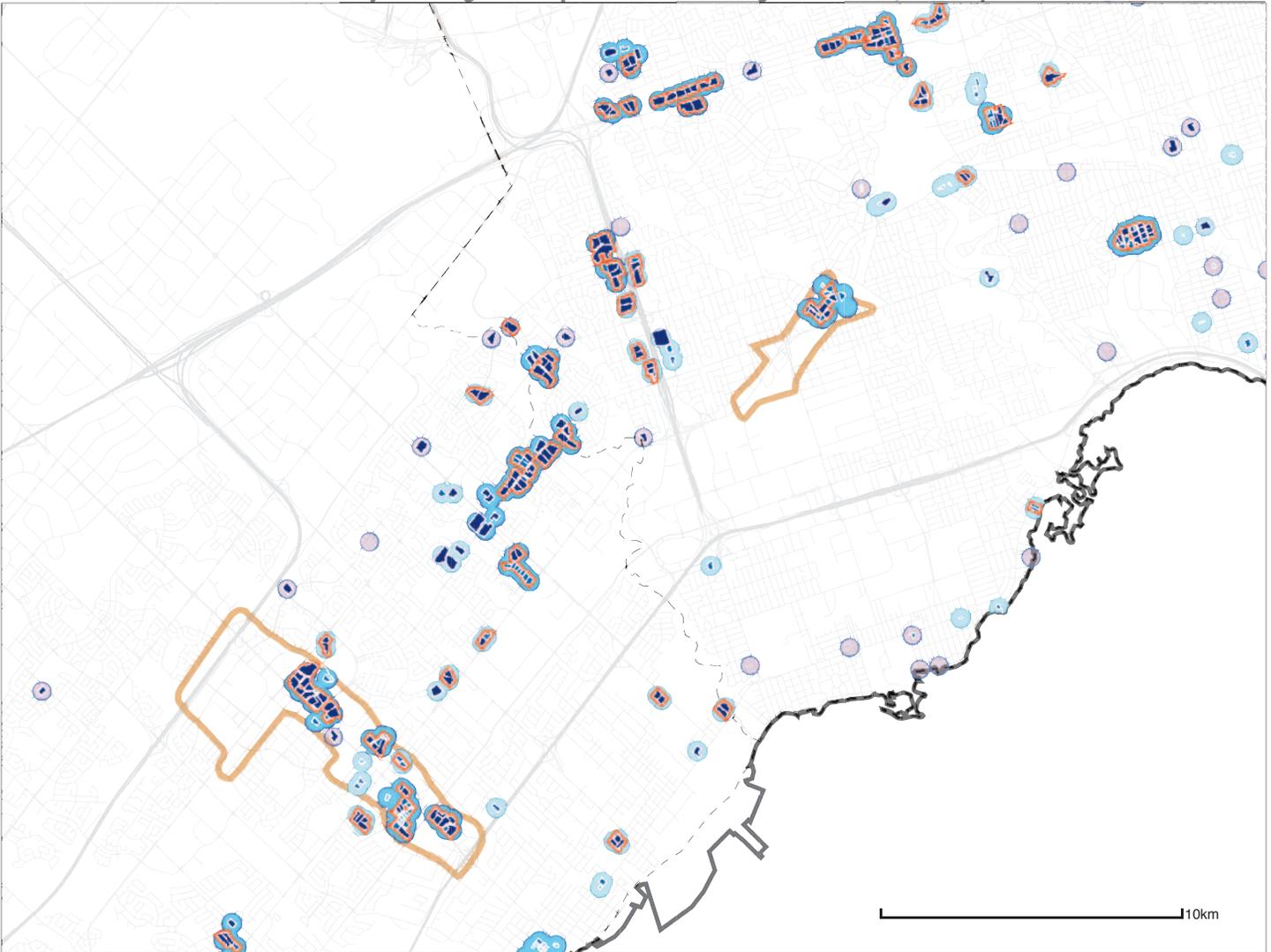
- Property larger than 1 ha
- Cluster of 5 or more Apartment Towers
- Cluster of 2-4 Apartment Towers
- Isolated Apartment Towers
- Cluster of directly adjacent properties
- Property boundary, greater than 1 ha
- Property boundary, between 0.5 ha and 1 ha
- Property boundary, less than 0.5 ha
- Designated Greenbelt Area
- Roadway
- Boundary of Jurisdictions within GGH



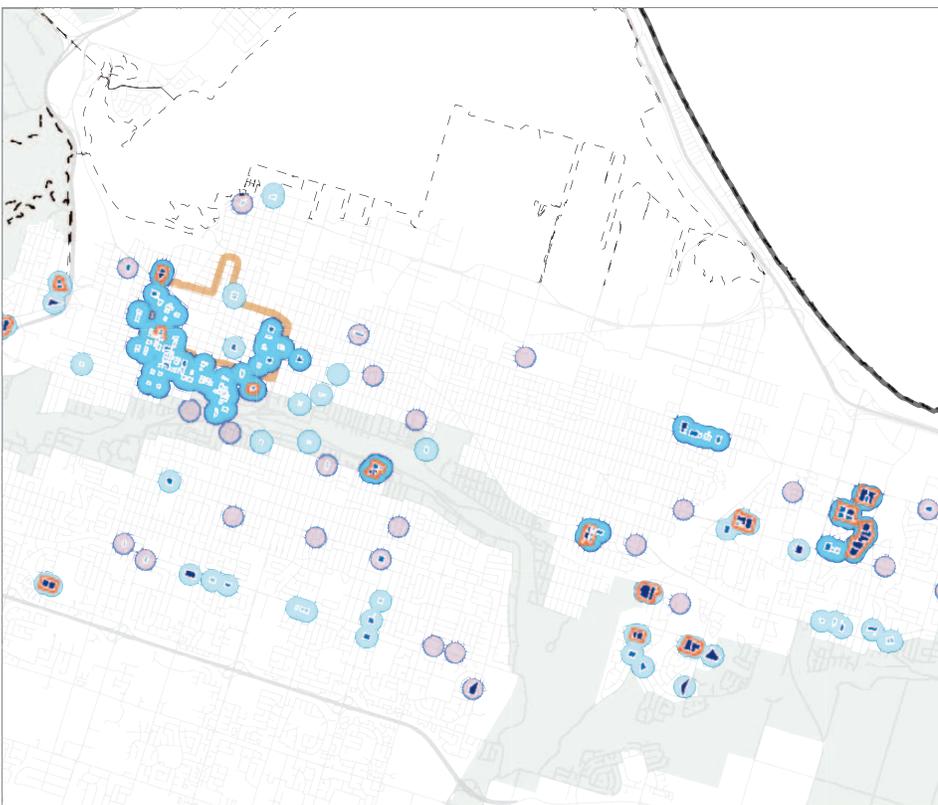
01) Don Valley Parkway and Eglinton Ave., Toronto

Base layers for this map, as well as designated Greenbelt Areas and Urban Growth Centre Locations provided by the Ministry of Infrastructure and the Ministry of Municipal Affairs and Housing of the Ontario government.

Regional rapid transit corridors shown on this map are based on the research team's interpretation of Schedule 2 of the Metrolinx Regional Transportation Plan entitled "25-Year Plan for the Regional Rapid Transit and Highway Network"



02) West Toronto & Peel



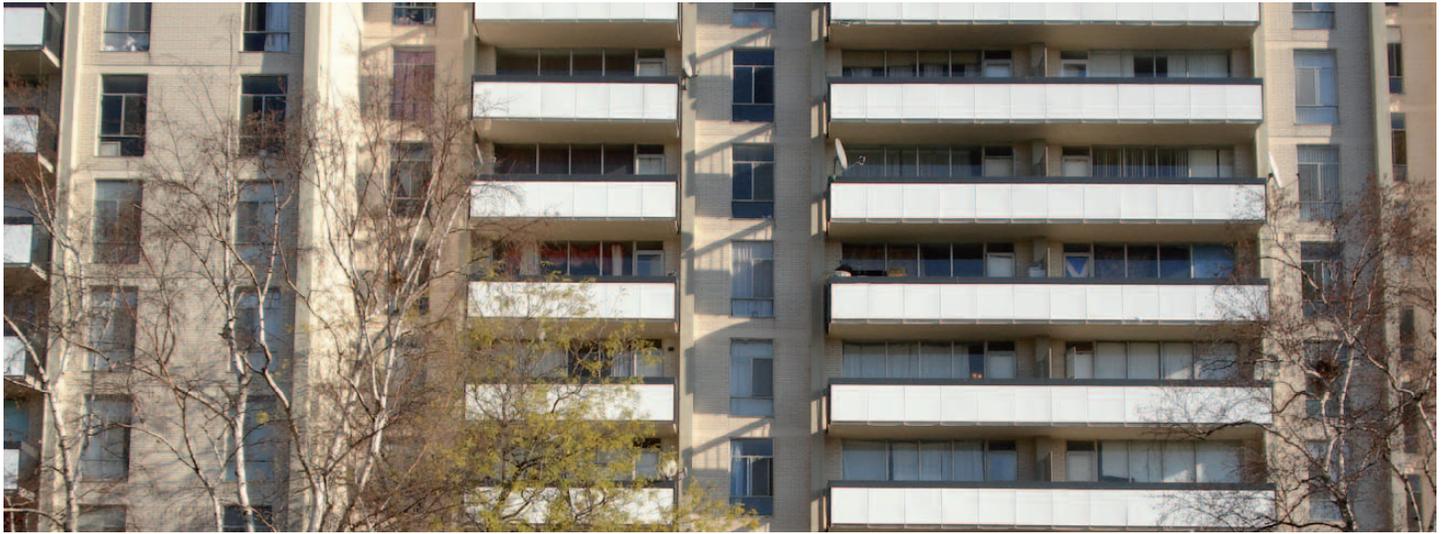
03) Downtown Hamilton

Legend

-  Approximate Boundary of Urban Growth Centre
-  Cluster of 5 or more Apartment Towers
-  Cluster of 2-4 Apartment Towers
-  Isolated Apartment Towers
-  Cluster of directly adjacent properties
-  Property boundary, greater than 1 ha
-  Property boundary, between 0.5 ha and 1 ha
-  Property boundary, less than 0.5 ha
-  Designated Greenbelt Area
-  Roadway
-  Boundary of Jurisdictions within GGH

Base layers for this map, as well as designated Greenbelt Areas and Urban Growth Centre Locations provided by the Ministry of Infrastructure and the Ministry of Municipal Affairs and Housing of the Ontario government.

Regional rapid transit corridors shown on this map are based on the research team's interpretation of Schedule 2 of the Metrolinx Regional Transportation Plan entitled "25-Year Plan for the Regional Rapid Transit and Highway Network"



3.5 Rental Housing

Apartment Towers Represent One-Third of the GGH's Rental Housing Stock

Overview

The vast majority of Apartment Towers were developed as rental apartments. Housing policy during the study period encouraged high-rise rental within new communities as a key component of the housing mix. This was to meet demands for affordable housing for a variety of tenure groups, as well as provide the densities necessary to optimize infrastructure efficiency and, in the case of Toronto, meet population targets established by the Metropolitan Planning Board.

Seventy-nine per cent of Apartment Towers in the GGH are rental tenure, representing 33 per cent of the total rental stock in the GGH. Within the GTHA this increases to 40 per cent, and 48 per cent in Toronto.

Unlike most high-rise construction today, Apartment Tower units were often built as family housing. Specific data related to unit size in GGH Apartment Towers is not available. However, recent studies* confirm a large concentration of larger units within Apartment Towers. A random sampling of ten buildings conducted by the research team resulted in a unit breakdown of 32 per cent three-bedroom, 43 per cent two-bedroom and 25 per cent one-bedroom. Further study is required to determine the full breakdown across the GGH.

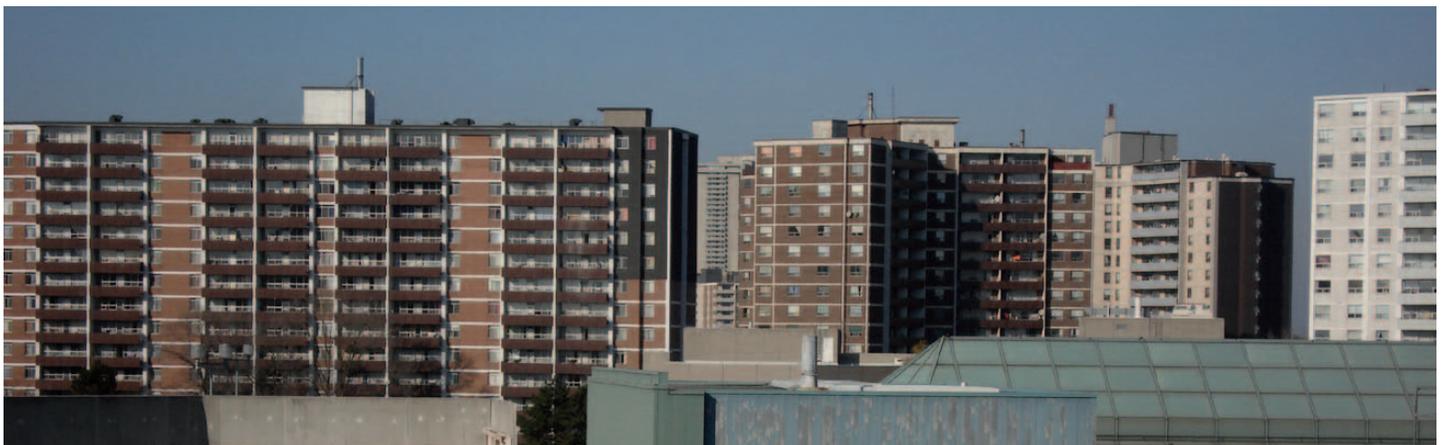
Public and Private Ownership

The majority of Apartments Towers in the region are privately owned and operated, however, the exact breakdown is currently unknown, and requires detailed study. In Toronto, approximately 85 per cent of towers are in private ownership.

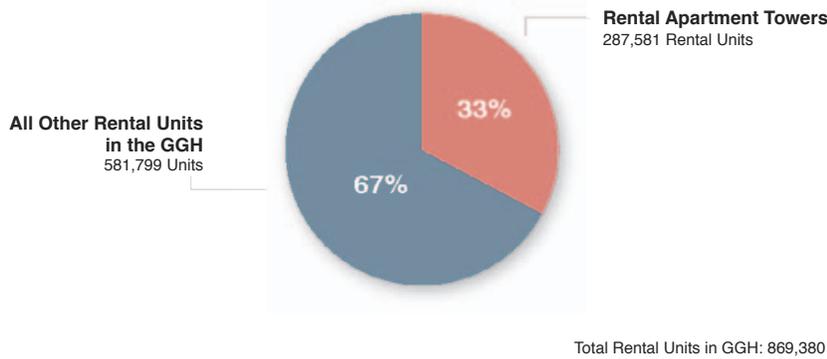
The vast majority of public housing in Toronto is owned and operated by the Toronto Community Housing Corporation (TCHC). TCHC is the largest social housing provider in Canada, as well as the largest owner of Apartment Towers in the GGH. Public owners have several advantages in conducting renewal efforts related to economies of scale, financing, and having a corporate social mandate.

Note

*United Way Toronto High-rise Apartment Livability Study, (Forthcoming, 2010).

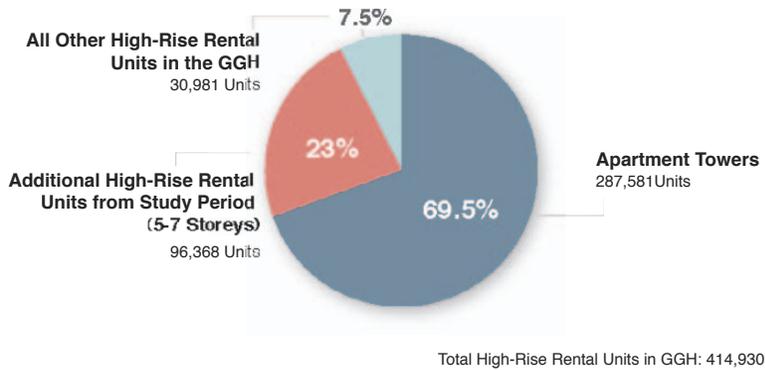


Rental Apartment Towers Related to all Rental in the GGH

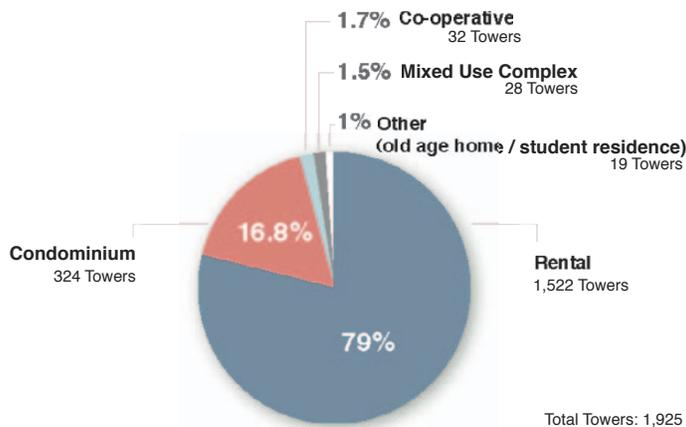


02

Rental Apartment Towers Related to All High-Rise Rental in the GGH



Apartment Towers by Type



Tenure Mix of Apartment Towers

Seventy-nine per cent of Apartment Towers are rental tenure (both private and public), 17 per cent are condominiums, and the remaining four per cent includes a mixture of tenures including cooperatives – equity (0.4 per cent), non-equity (1.1 per cent), and co-ownership (0.2 per cent) – as well as seniors housing (0.3 per cent) and student residences (0.2 per cent).

High-Rise Rental Housing

The Apartment Towers under study represent the vast majority of high-rise rental housing in the GGH (69.5 per cent), increasing to 72 per cent in the GTHA and 77 per cent in Toronto. The development of high-rise rental housing became increasingly rare following the study period, with the majority of post-1984 high-rise housing developed as condominiums. As a result, only 7.5 per cent of high-rise rental housing was developed after the study period. Twenty three per cent of the high-rise rental housing stock are buildings from the study era that are five to seven storeys.

Condominiums

The 17 per cent of Apartment Towers that are condominiums were generally developed in the second half of the post-war housing boom, following the introduction of the Condominium Act in 1968. A handful of rental apartments were converted to condo-

Images

- 01) Apartment Cluster, Former Borough of North York
- 02) Rental Availability Advertisement, Mississauga



3.6 Social Need

Apartment Towers Tend to be Located in Areas of High Social Need

Overview

Seventy-seven per cent of all Apartment Towers in the GGH are found in Census Dissemination Areas considered to have high or very high social need, while only 12 per cent of towers are found in areas considered to have low or very low social need. In some cases these Dissemination Areas are comprised entirely of Apartment Towers, while in other cases the Dissemination Areas may include other forms of housing.

On a scale of one to five, where one represents very low social need and five represents very high social need, the average GGH tower has a score of 4.08. The average Apartment Tower in Toronto has a score of 3.98, while the average in the GTHA without Toronto is 4.21, and the Outer Ring is 4.30.

Clearly, there is a strong correlation between Apartment Tower Neighbourhoods and areas of high social need. This is more pronounced in the GTHA without Toronto and in the Outer Ring of the GGH than it is in Toronto, where Apartment Towers can also be found in relatively affluent areas, notably along the Yonge Street corridor. Further information related to Apartment Towers and social need can be found in United Way Toronto’s High-rise Apartment Livability Study (Forthcoming 2010).

Defining Social Need

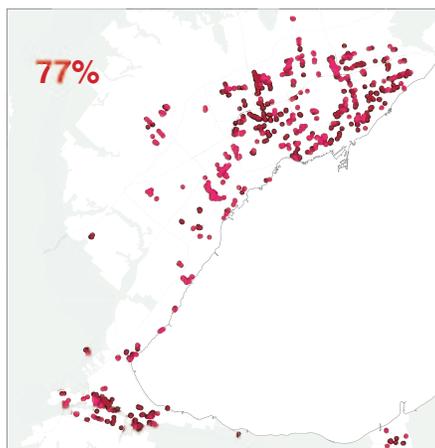
Social need, as defined for this study, is an aggregated measure of households with high proportions of:

- lone-parent families;
- persons below the Census low-income cut-off;
- persons 25 years of age and over with no educational certificate, diploma or degree;
- family income from government transfers;
- unemployment; and
- persons aged 65 and over.

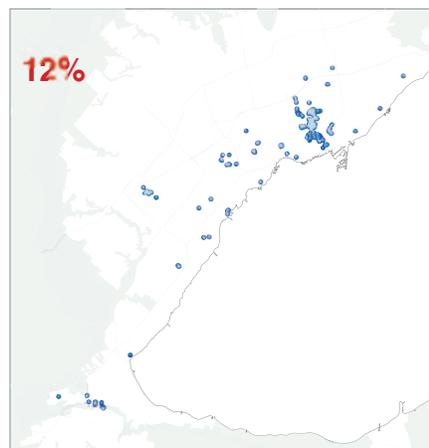
For further information refer to Technical Appendices.

Apartment Towers and Health Equity

A number of recent studies, such as Toronto Public Health’s Unequal City, and Poverty is Making Us Sick, by the Wellesley Institute and the Community Social Planning Council of Toronto, point to strong links between poverty and poor health. The poorest Ontarians have a lower health status (as measured by both morbidity and premature mortality) than moderate income Ontarians, who in turn have a lower health status than middle-income Ontarians, and so on. Although this study did not assess health status in Apartment Tower Neighbourhoods, the well-documented linkages between socio-economic status and health, combined with the findings of this study related to social need and Apartment Tower Neighbourhoods, would suggest that health equity is a significant issue in these neighbourhoods.



Apartment Towers in Areas of High and Very High Social Need (77%)



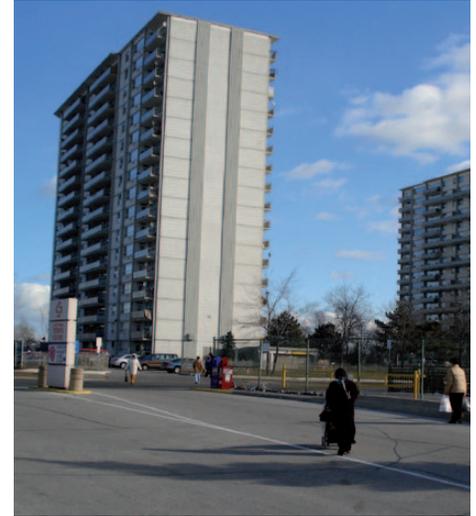
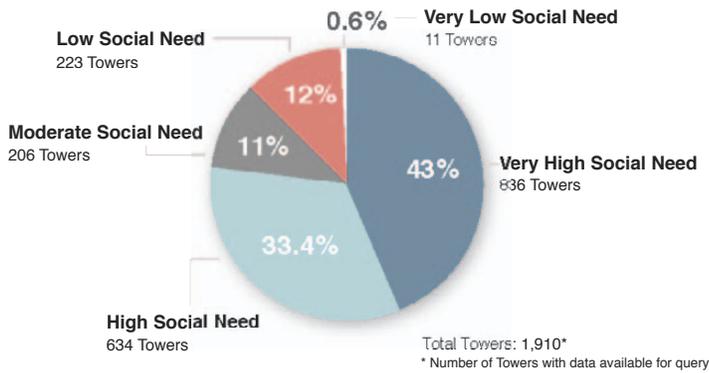
Apartment Towers in Areas of Low and Very Low Social Need (12%)

Legend

- High and Very High Social Need
- Low and Very Low Social Need

150km

Social Need by Category



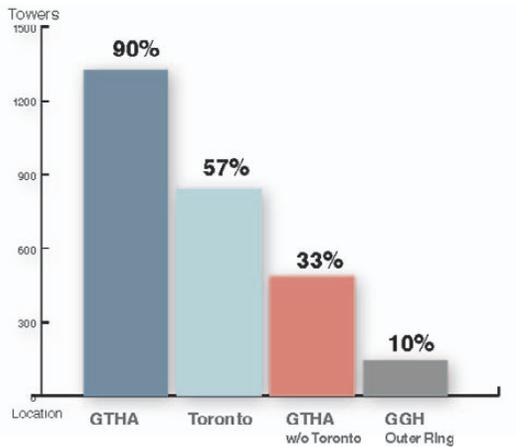
01

General Lack of Mixed-Use

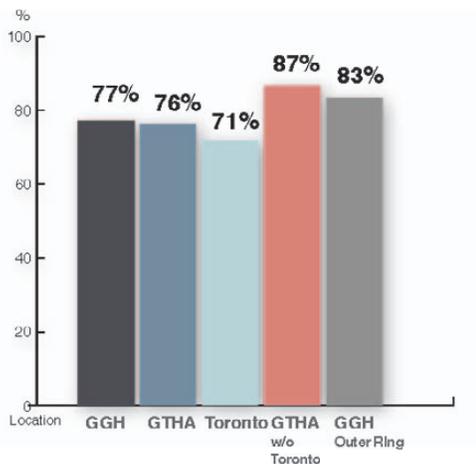
Though planned to be mixed-use at a district scale, many Apartment Tower Neighbourhoods lack access to daily conveniences within walking distance. Generally, neighbourhood facilities, services and retail were not integrated into Apartment Tower Neighbourhoods, but rather designed for easy access by vehicle. This presents a more challenging commute on foot or by transit, and leaves large residential areas devoid of activity.

As a result, Apartment Tower Neighbourhoods often lack convenient access to the services and amenities that offer employment opportunities and address community needs. A full 62 per cent of rental Apartment Towers are zoned exclusively for residential purposes. An additional 17 per cent contain a mix of use limited to a small commercial unit, often a small tuck shop or convenience store. Less than one per cent of Apartment Towers are zoned 'mixed development' that allows diverse and extensive retail and services, such as Crescent Town in southeastern Toronto.

Per Cent of Apartment Towers with High and Very High Social Need by Location



Per Cent of Apartment Towers with High and Very High Social Need within Each Location



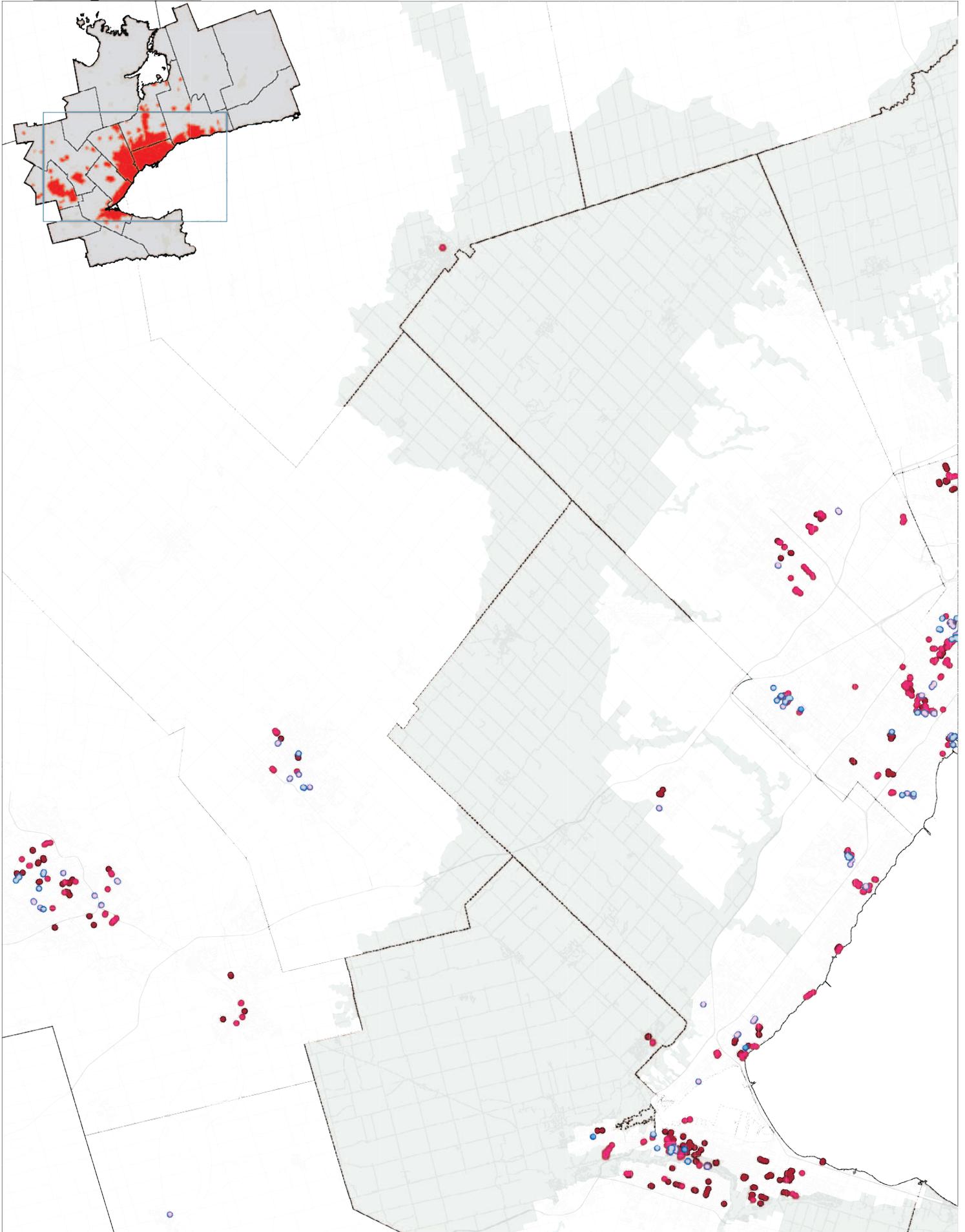
Images

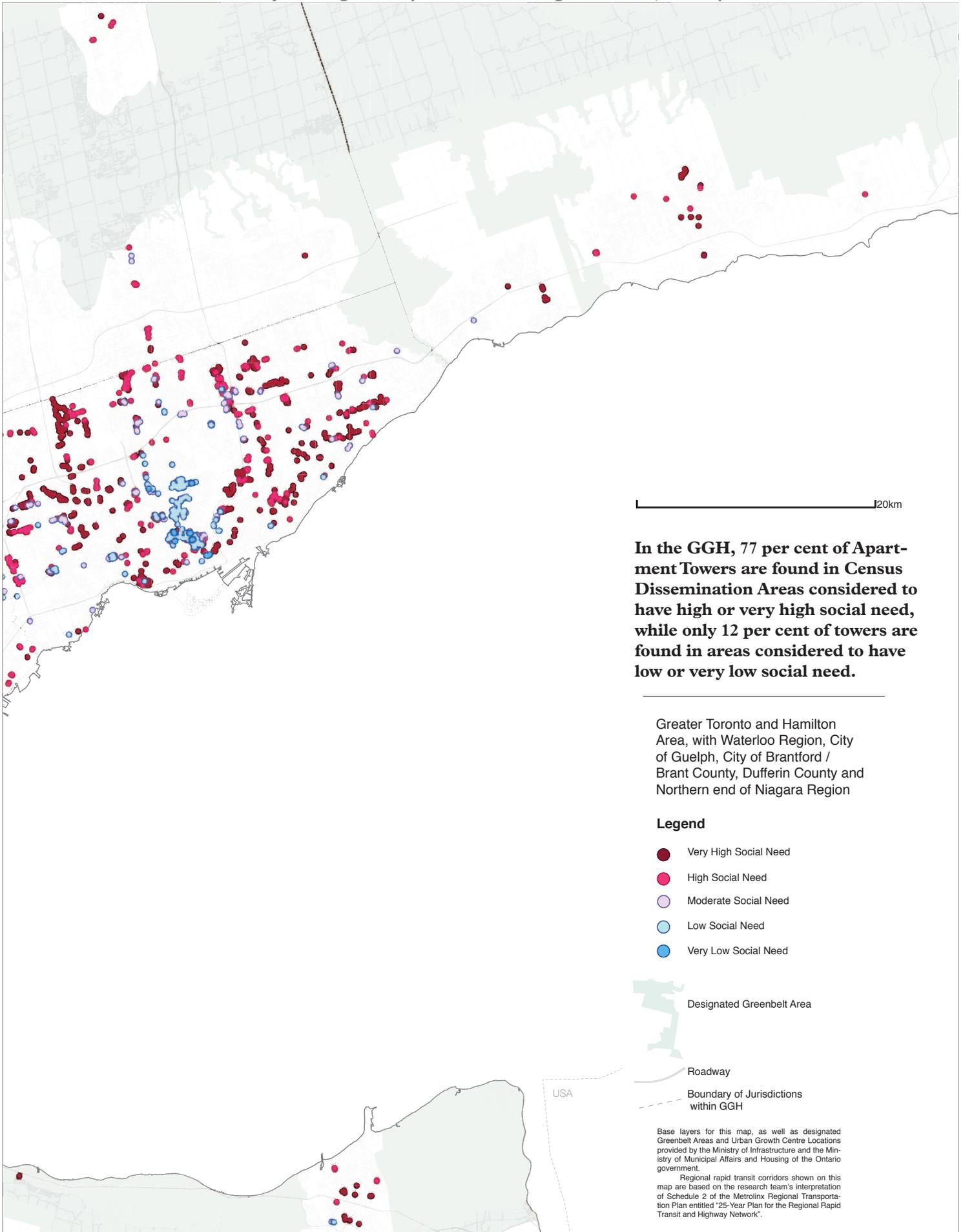
01-02) Apartment Tower with single-use zoning, surrounded by surface parking



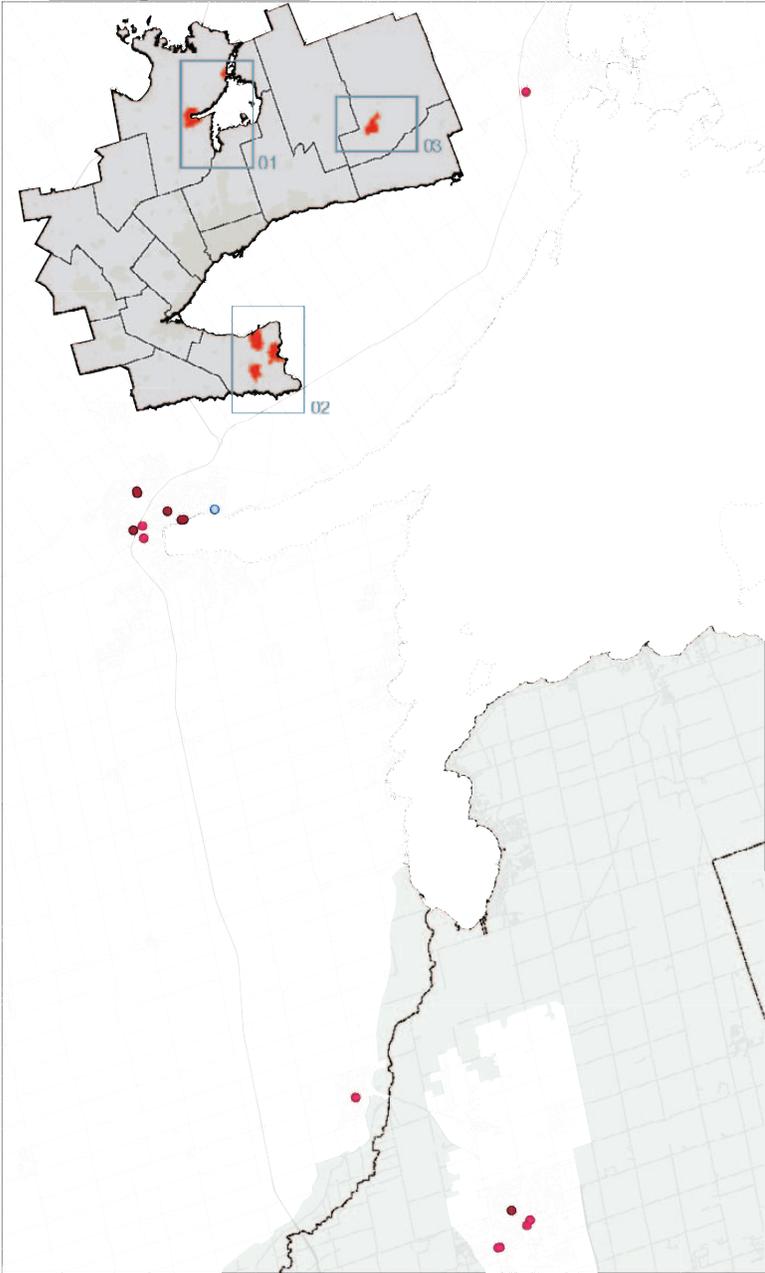
02

Taking Stock 3.6 Tower Renewal in the Greater Golden Horseshoe

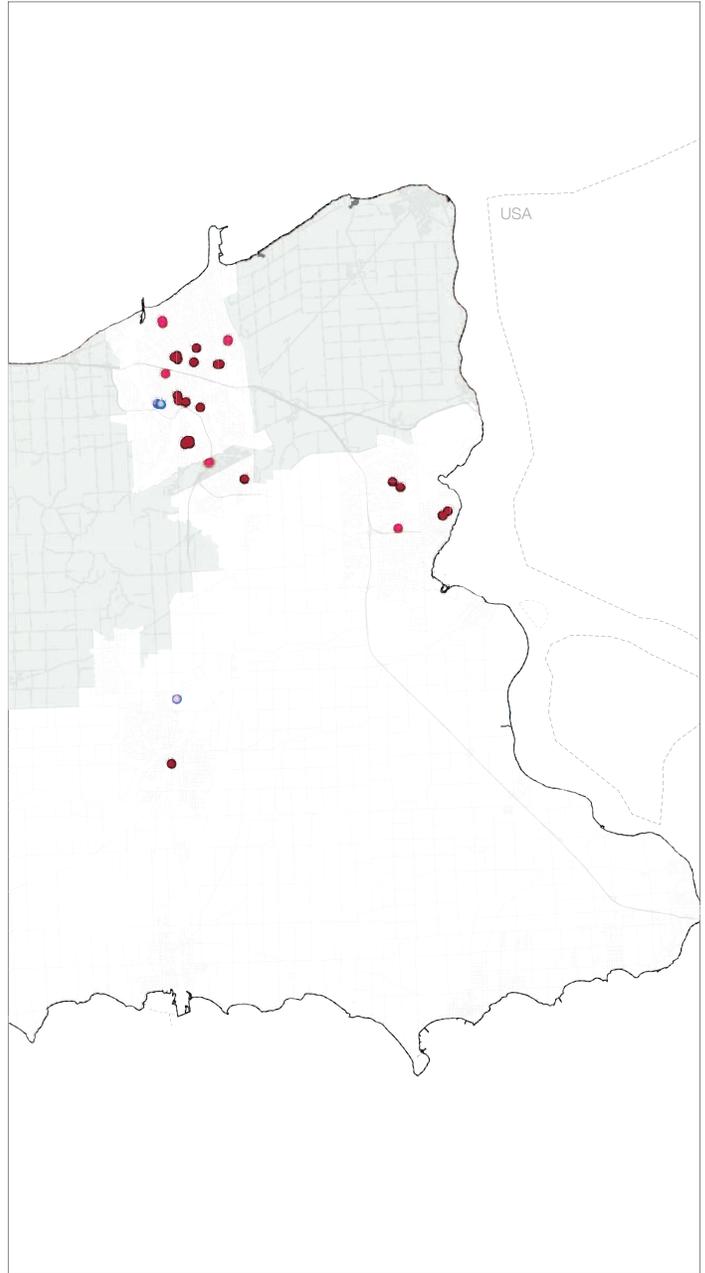




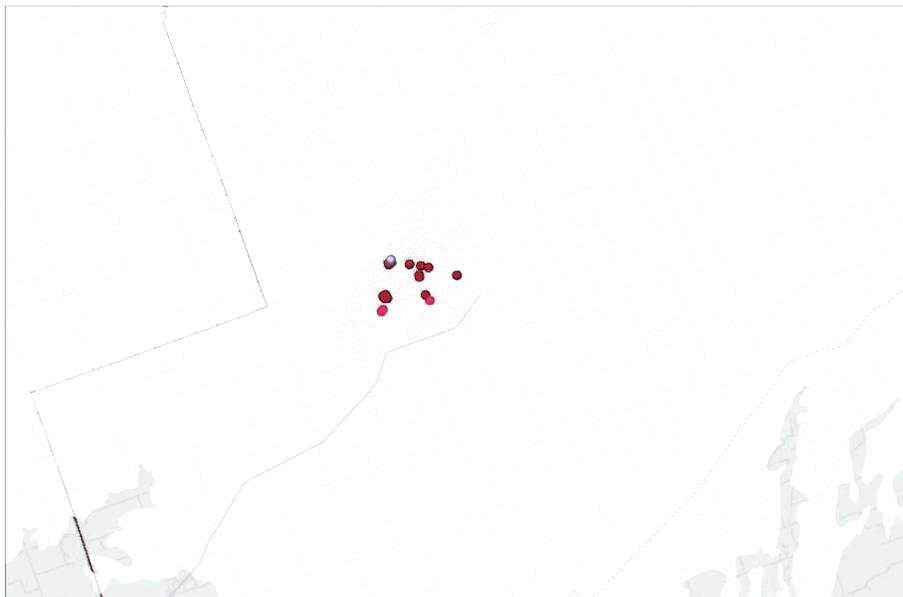
Taking Stock 3.6 Tower Neighbourhood Renewal in the Greater Golden Horseshoe



01) Simcoe County



02) Niagara Region



03) City of Peterborough

Legend

- Very High Social Need
- High Social Need
- Moderate Social Need
- Low Social Need
- Very Low Social Need

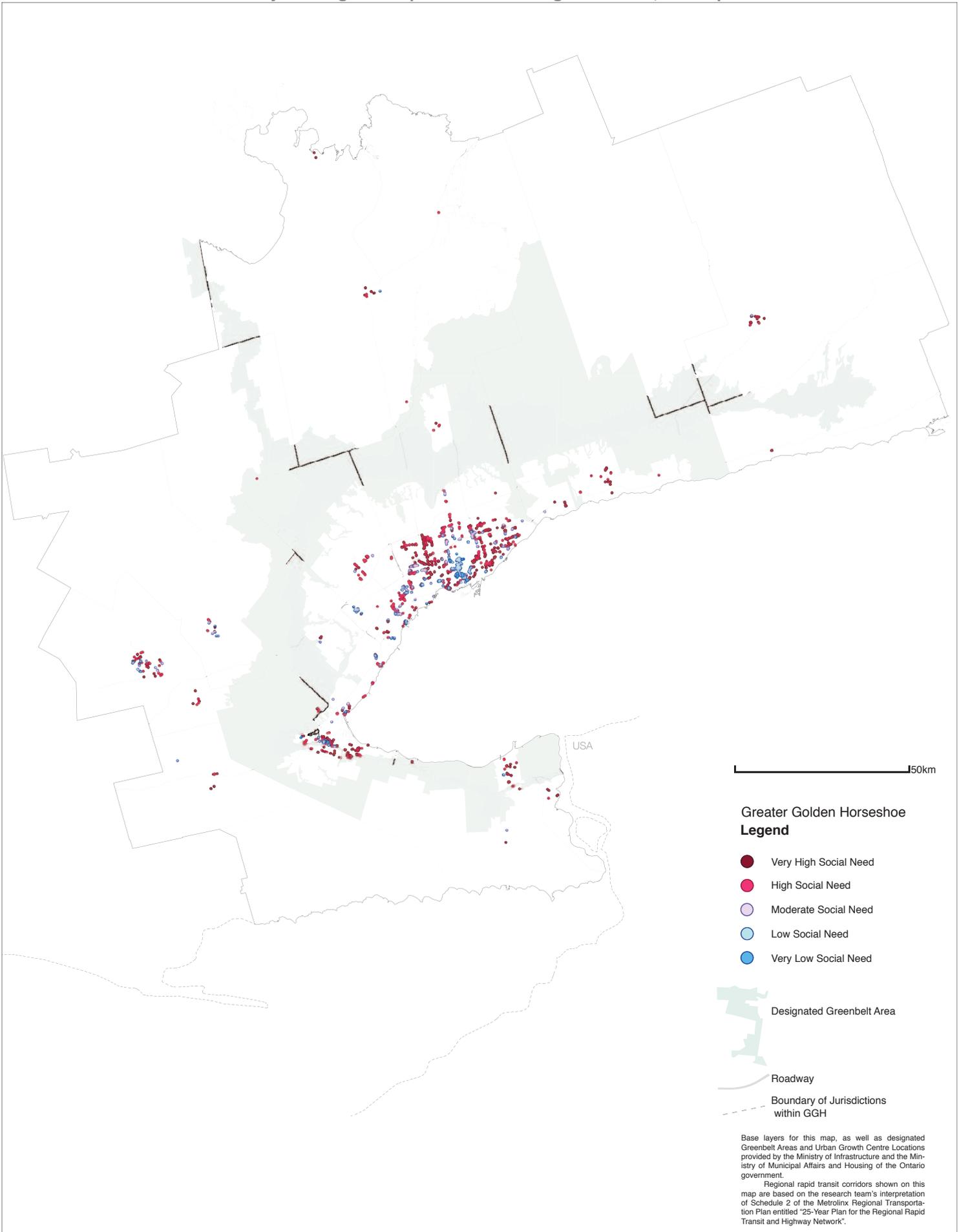
Designated Greenbelt Area

Roadway

Boundary of Jurisdictions within GGH

Base layers for this map, as well as designated Greenbelt Areas and Urban Growth Centre Locations provided by the Ministry of Infrastructure and the Ministry of Municipal Affairs and Housing of the Ontario government.

Regional rapid transit corridors shown on this map are based on the research team's interpretation of Schedule 2 of the Metrolinx Regional Transportation Plan entitled "25-Year Plan for the Regional Rapid Transit and Highway Network".





3.7 Transportation

Residents of Apartment Towers Use Cars Less Often than Other Residents of the GGH

Overview

Residents of Apartment Towers in the GGH are more frequent users of public transit than other residents within the same municipality. Using data from the 2006 Transportation Tomorrow Survey, sixty-two per cent of Apartment Towers were found to be within geographic “traffic zone” areas with higher than average public transit use for their respective municipalities.

A similar trend can be seen with respect to walking and cycling. Fifty-eight per cent of Apartment Towers are in zones with higher than average rates of walking and cycling. This finding is consistent with the findings of the walkability survey research undertaken by Paul Hess of the University of Toronto and Jane Farrow of Jane’s Walk. Those surveys have consistently identified high rates of dependence on walking and cycling in Apartment Tower Neighbourhoods, despite the frequent lack of amenities for pedestrians and cyclists in these neighbourhoods.

In contrast to the higher than average rates of transit use, walking and cycling, 70 per cent of Apartment Towers are located in zones with lower than average car ownership rates.

Collectively, these findings indicate a trend towards alternative forms of transportation amongst residents of Apartment Towers. Further study would be required to determine the extent to which this trend is due to the socio-economic situation of these residents, the level of transit service that is available to them, and/or the built form of the neighbourhood.



01

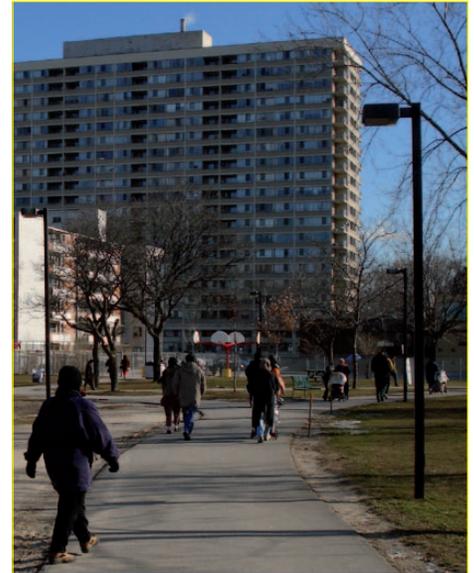
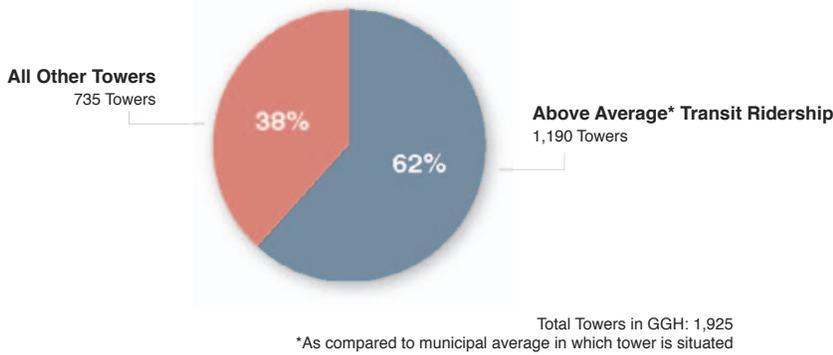
Images

- 01) TTC stop adjacent to Apartment Tower
- 02-03) The quality of pedestrian realm varies within Apartment Neighbourhoods
- 04) Members of focus group for Apartment Neighbourhood Walkability study



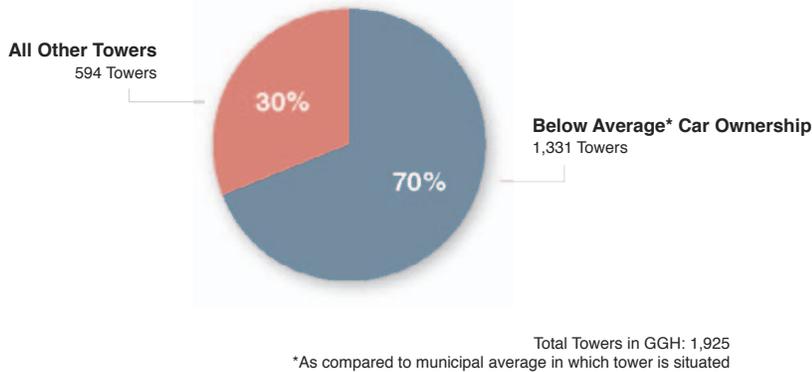
02

Apartment Towers with Above Average Transit Ridership



03

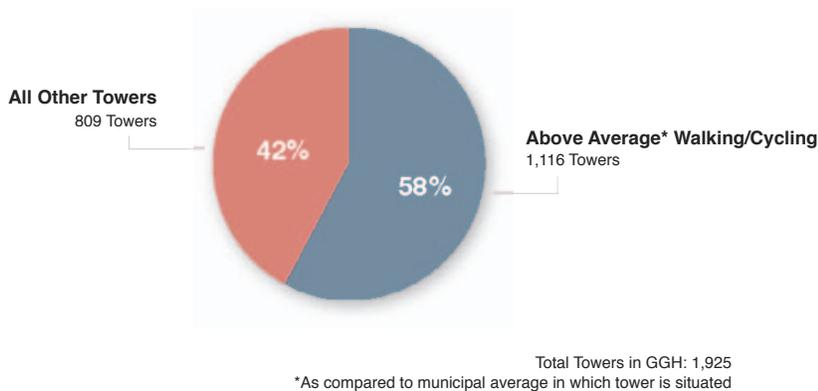
Apartment Towers with Below Average Car Ownership



© Jane Farrow

04

Apartment Towers with Above Average Walking/Cycling



Walkability Studies

Between 2008 and 2010, the University of Toronto and Jane's Walk conducted walkability studies in eight neighbourhoods in the inner suburbs of Toronto with large concentrations of high-rise apartments. Directed by Paul Hess and Jane Farrow, the study consisted of over 30 focus groups with residents. Focus groups revealed that residents are highly reliant on walking and transit to make their regular trips to the grocery store, to work, or to school. Two-thirds of participants report getting most of their errands and shopping done locally, mainly on foot. In the case of grocery shopping, about 50 per cent of participants say they rely strictly on walking to get their groceries and, in some areas, more than 90 per cent of respondents say they walk their children to school. For more information, visit: www.Janeswalk.net.



© Aaron Seggaert

3.8 Greenhouse Gas Production

Apartment Towers are Large Producers of Greenhouse Gases

Overview

Apartment Towers are among the highest energy users of all housing types in the region, and are collectively responsible for a considerable volume of residential GHG emissions. In various studies, Apartment Towers have been found to be among Ontario's most energy intensive buildings, with data suggesting they require as much as 25 per cent more energy per square metre compared to a single detached house.*

Based on the most recently available studies, the Community Energy Plan Report prepared by Arup for the City of Toronto's Tower Renewal Office, and the Tower Renewal Guidelines, prepared by the John H. Daniels Faculty of Architecture at the University of Toronto for Canada Mortgage and Housing Corporation, estimates for GHG production from Apartment Towers range from 5.3 to 5.8 tonnes per unit. In a similar study in the United Kingdom, annual GHG production for tower block flats ranged from 3.5 to 6.8 tonnes per year.** If these ranges are aggregated across all Apartment Towers in the GGH, total GHGs for the operation of Apartment Towers would be between 2.0 to 2.2 million tonnes annually. This represents roughly six per cent of GHG's produced by all buildings in Ontario, with Apartment Towers in Toronto responsible for roughly 23 per cent of its residential GHG emissions.***

It is important to note that these estimates are based solely on the energy used for building operation. They do not reflect total household energy use related to transportation and other factors. Therefore, actual GHG emissions attributable to Apartment Towers and their residents would be much higher than the estimate given here.

Note on GHG Figures

*The recent studies discussed in this section have documented energy use from sample Apartment Towers ranging from 1.05 Gigajoules per square metre of floor space (GJ/m^2) to $1.4 \text{ GJ}/\text{m}^2$, with some buildings as high as $1.7 \text{ GJ}/\text{m}^2$. Natural Resources Canada data places apartments developed between 1946 and 1969 at an average of $1.25 \text{ GJ}/\text{m}^2$, compared to single-family homes which average $1.0 \text{ GJ}/\text{m}^2$.

** Road Map to 60% - Eco-Refurbishment of 1960s Flats - Energy Saving Trust, 2008.

Share of Toronto's GHGs

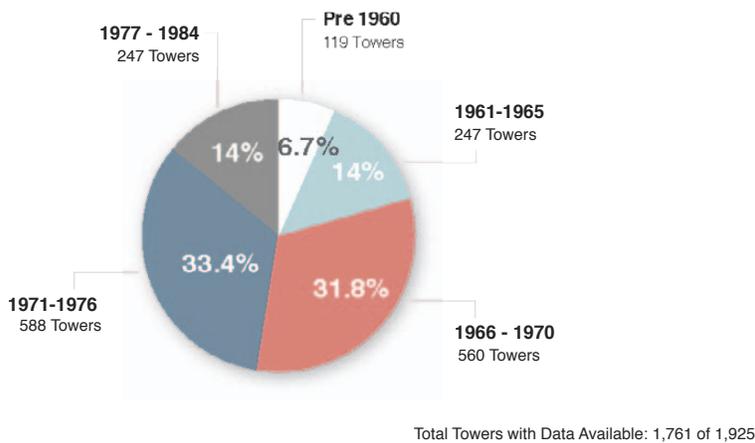
***The City of Toronto's Power to Live Green Report (2009) estimates that Toronto's total GHG production as a result of natural gas and electricity usage is 14.7 megatonnes. Of this, 6.45 megatonnes, or 44 per cent, is from the residential sector. Based on this, we estimate that Toronto's Apartment Towers are responsible for approximately ten per cent of all GHGs related to natural gas and electricity usage and 23 per cent of residential GHGs produced by residential buildings in Toronto.



01

02

Apartment Towers by Building Code Era (Development Period)



Building Code Era

While generally Apartment Towers from the study era perform poorly in terms of energy use, variables in construction methods over the duration of the housing boom (1945-1984) give buildings a range of energy performance attributes. Energy performance is highly related to the condition of the building envelope (among other variables), which would relate to the building code at the time of construction. As part of the analysis, Apartment Towers have been divided into building code eras in order to establish a framework for further analysis in which physical attributes can be attributed to these eras of construction, both related to building code regulations specifically, and trends in building construction more generally.

Building codes in effect during the period of construction of the target housing resource are as follows:

- 1953 National Building Code
- 1960 National Building Code
- 1965 National Building Code
- 1970 National Building Code
- 1976 Ontario Building Code
- 1984 Ontario Building Code

Solid Waste

Apartment Towers are significant producers of solid waste, with generally poor diversion rates in relation to municipal and provincial household averages. For example, organics diversion, such as the GreenBin program in Toronto, has yet to be introduced into most Apartment Towers.

The most recent study focusing on waste production and diversion rates in Apartment Towers was conducted by Genivar for the City of Toronto's Tower Renewal Office. This study indicates average waste generation per unit of 601 kg, with an average diversion rate of 12 per cent. Extrapolated across the region, at this diversion rate, over 200,000 tonnes of waste may go to landfill each year from Apartment Towers in the GGH.

Images

- 01) Containing hundreds of households, targeting Apartment Towers for green refurbishment may be a more efficient strategy for GHG reduction than individual detached houses.
- 02) Current waste management practices in Toronto's Apartment Towers typically result in lower than average diversion rates, significant GHG production as a result of transporting waste to landfill, and an impoverished physical environment.

