

Tower Neighbourhood Renewal in the Greater Golden Horseshoe

An Analysis of High-Rise Apartment Tower Neighbourhoods
Developed in the Post-War Boom (1945-1984)

Prepared by
E.R.A. Architects,
planningAlliance, and the
Cities Centre at the University of Toronto

for the
Ontario Growth Secretariat
Ministry of Infrastructure
November 2010

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Project Team

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Executive Summary



Executive Summary

Background

The Greater Golden Horseshoe's (GGH's) pattern of urbanization is unique in North America. A major contributing factor to this urban form is the significant development of high-rise modern apartment housing that occurred in the post-war period, roughly between 1945 and 1984, though concentrated between 1960 and 1980. There are nearly 2,000 post-war Apartment Towers located throughout the region as a result of post-war planning policies that encouraged the “tower-in-the-park” housing model and higher density apartment clusters in new suburban communities.

Though unique in North America, the region's decentralized clusters of modern towers share similarities with post-war housing developments found the world over, with particular concentrations in Europe, the former Soviet Union, and parts of Asia. In many of these locations, the revitalization of aging tower clusters and their neighbourhoods has been recognized as a key strategy for achieving contemporary urban planning goals of low-carbon, prosperous, and equitable communities. With the European Union showing particular leadership in this field, post-war Apartment Tower Neighbourhoods have emerged as model low-carbon communities and centres of social and economic development, through targeted green refurbishment and integrated processes of neighbourhood renewal. Throughout this report, this process will be defined as Tower Neighbourhood Renewal, and residential buildings that are eight storeys and above, constructed between 1945 and 1984, will be referred to as Apartment Towers.

The Province of Ontario has established a policy framework to foster regional sustainability and prosperity, through the development of initiatives such as the Greenbelt, the Growth Plan for the Greater Golden Horseshoe, The Big Move – Metrolinx Regional Transportation Plan, the Poverty Reduction Strategy, and the Go Green Action Plan on Climate Change, among others. The GGH's prevalence of post-war Apartment Towers makes it uniquely suited in North America to benefit from engaging in Tower Neighbourhood Renewal strategies as a compliment to these initiatives.

The focus of this study is two-fold. The first objective is to analyze and catalogue this housing resource to better understand its current role within the GGH. The second objective is to examine the potential for Tower Neighbourhood Renewal to support the realization of provincial priorities, such as implementing the Growth Plan for the Greater Golden Horseshoe, creating a network of regional rapid transit, conserving energy, reducing greenhouse gas (GHG) production, reducing poverty, providing affordable housing, and building a green economy.

The Greater Golden Horseshoe's (GGH's) pattern of urbanization is unique in North America, with nearly 2,000 post-war apartment towers located throughout the region.



“Tower-in-the-park” housing model typical of sites throughout the GGH

Tower Neighbourhood Renewal

In this report, the opportunities related to achieving complete and sustainable communities within Apartment Tower clusters will be referred to as Tower Neighbourhood Renewal. Described as Tower Renewal in previous documents, Tower Neighbourhood Renewal makes explicit the holistic set of strategies related to the renewal, retrofit, and regeneration of Apartment Clusters, and their intersection with the complete communities mandate of the Growth Plan, prosperity and sustainability mandates of provincial policy, as well as comprehensive sustainable planning in general.

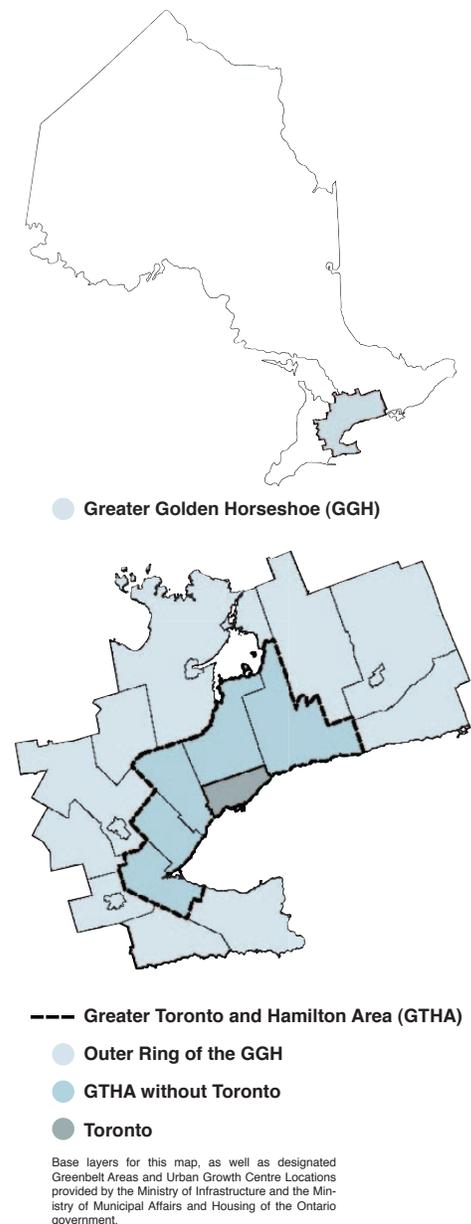
Findings Related to Current State of Apartment Towers:

Key findings of this study related to the current state of these Apartment Towers and their neighbourhoods include the following:

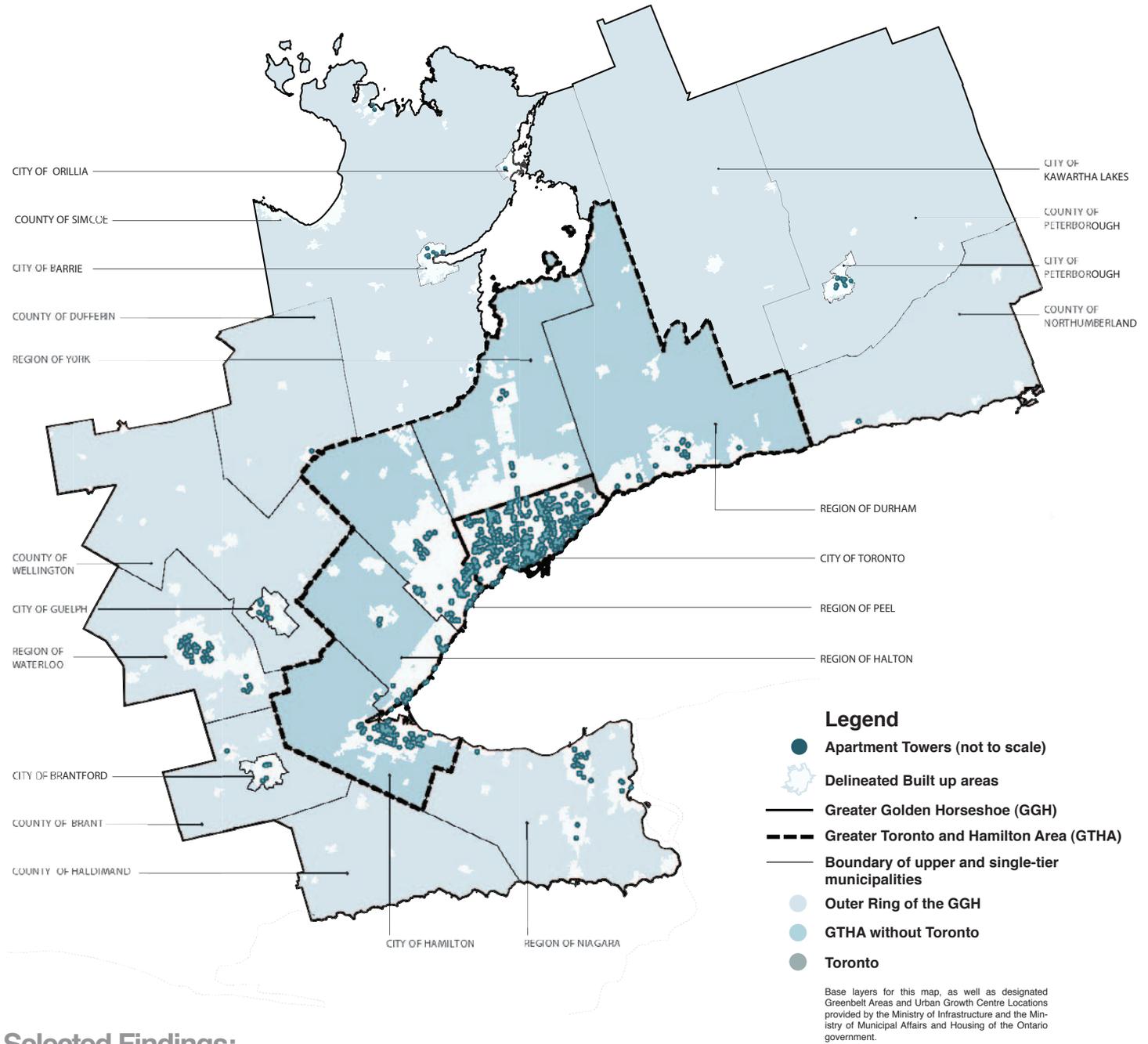
- Apartment Towers are a major component of the GGH’s housing stock. There are 1,925 Apartment Towers in the GGH. Collectively these towers are home to approximately one million people.
- Apartment Towers represent one-third of the GGH’s rental housing stock, and 48 per cent of the City of Toronto’s rental stock.
- Apartment Towers are among the highest energy users of all housing types in the region, requiring as much as 25 per cent more energy per square metre compared to a single detached house. Similarly, they typically have low waste diversion rates of less than 12 per cent.
- Apartment Towers are very closely linked to areas of social need. 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.
- Apartment Towers can be found throughout the GGH. The majority (62 per cent) are found in Toronto, with 29 per cent found in the GTHA without Toronto and nine per cent found in the municipalities that make up the Outer Ring of the GGH (see diagram of region on this page). Over two-thirds of upper- and single-tier municipalities in the GGH have Apartment Towers as part of their housing mix.
- Apartment Towers in the GGH are generally found in clusters. 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 large clusters of five or more. The largest of these Apartment Tower clusters contain more than 10,000 households.
- Apartment Towers are generally situated on large land parcels of 1 hectare or more. This is a legacy of open space ratios that were encouraged to achieve the “tower-in-the-park” configuration, with 80 to 90 per cent of the site area left as open space. The total land resource in the GGH on which Apartment Towers are situated is 2,198 hectares. More than half of apartment properties are directly adjacent to another apartment property, creating clusters of adjoined open space.
- Residents of Apartment Towers tend to rely more on transit, walking and cycling to get around than other residents of the region. Sixty-two per cent of Apartment Towers are within areas with higher than average public transit use for their respective municipalities. Fifty-eight per cent of Apartment Towers are in zones with higher than average rates of walking and cycling. Seventy per cent are located in zones with lower than average car ownership rates.

Greater Golden Horseshoe

The study area for the project is the Greater Golden Horseshoe (GGH). Located in Southern Ontario, the GGH is home to over eight million people, roughly 60 per cent of Ontario’s population, and 25 per cent of the population of Canada.

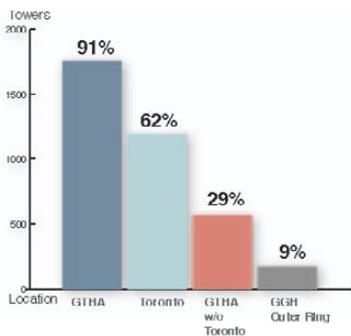


Apartment Towers in the Greater Golden Horseshoe 1945-1984, Eight Storeys and Above

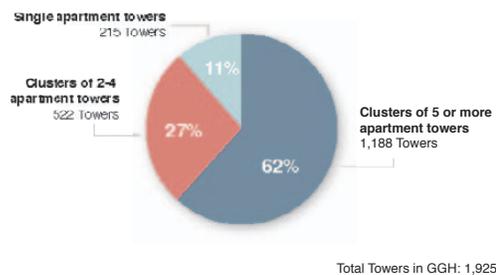


Selected Findings:

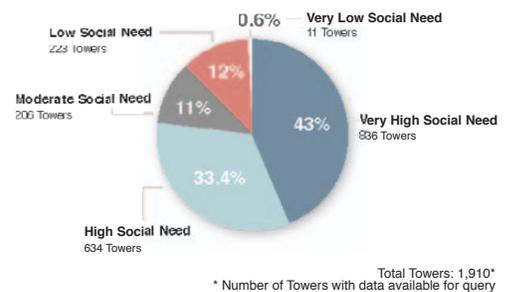
Location of GGH's 1,925 Apartment Towers



Percentage of Apartment Towers Grouped in Clusters Within 150m of One Another



Apartment Towers and Social Need



Tower Neighbourhood Renewal and Provincial Policy Objectives:

The Renewal of Apartment Tower Neighbourhoods provides a significant opportunity to support the livability and sustainability goals of Provincial policy. Found in large clusters throughout the region, tower neighbourhoods provide a large geography for action. The following is a breakdown of key Tower Neighbourhood Renewal opportunities, and how they relate to key areas of Provincial interest.

The Big Move - Metrolinx Regional Transportation Plan:

Given the already strong tendencies of Apartment Tower residents to use transit, and their relative dependence on transit due to lower than average car ownership rates, Apartment Tower Neighbourhoods have significant potential to function as the ridership anchors that will enhance the effectiveness of the Regional Transportation Plan (RTP) transit network. Currently, only 17 per cent of Apartment Towers are within walking distance (approximately 500 metres) to regional rapid transit. The RTP's 25-year regional rapid transit network would significantly improve this situation, providing direct access to nearly 64 per cent of towers. As detailed planning proceeds for the RTP transit network, an understanding of Apartment Towers can help to guide decisions on routing and station location. Knowledge of Apartment Tower Neighbourhoods and their needs and opportunities can also inform the Transportation Master Plans and Active Transportation Master Plans that the RTP suggests be undertaken by municipalities, as well as the Transit Supportive Land Use Planning Guidelines being developed by the Ministry of Transportation. Local transit, pedestrian, and cycling infrastructure strategies as they relate to apartment clusters could also be considered.

Poverty Reduction Strategy:

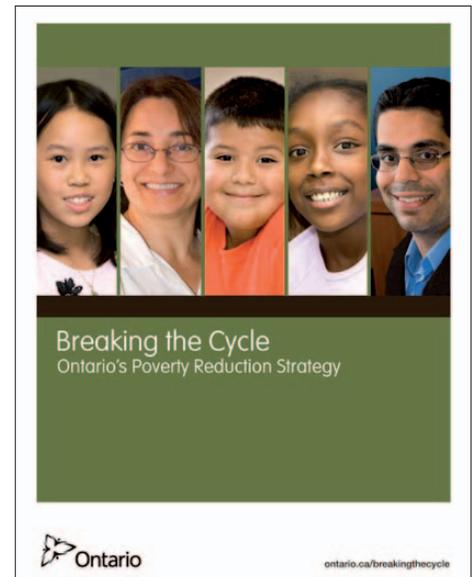
With high concentrations of New Canadians as well as youth in areas of high social need, there is significant potential to integrate the renewal of these neighbourhoods with Ontario's Poverty Reduction Strategy programs such as the expansion of Parenting and Family Literacy Centres, Ontario Early Years Centres and After School Programs, the Community Use of Schools Program and Community Hub Program, and the Newcomer Settlement Program. Renewal can also contribute to affordable housing supply and bring new employment and social enterprising opportunities to what are currently isolated neighbourhoods.

Go Green Action Plan on Climate Change:

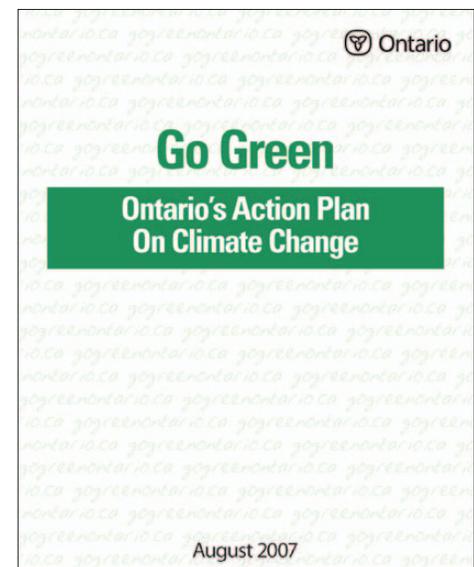
Tower Neighbourhood Renewal has the potential to be a key component of Ontario's climate change strategy, and contribute to the greenhouse gas (GHG) reduction targets of Go Green: Ontario's Action Plan on Climate Change. Apartment Towers are among the most energy wasteful housing types, and collectively are responsible for upwards of two megatonnes of GHGs on an annual basis for building operation alone. However, Apartment Towers are well suited for refurbishment, and in other jurisdictions they have been upgraded to become model green buildings, with GHG output reduced by more than 50 per cent. The dense clusters of Apartment Towers that are common throughout the GGH also provide opportunities for using distributed clean energy and district heating and cooling systems, as well as alternative waste management systems.



01



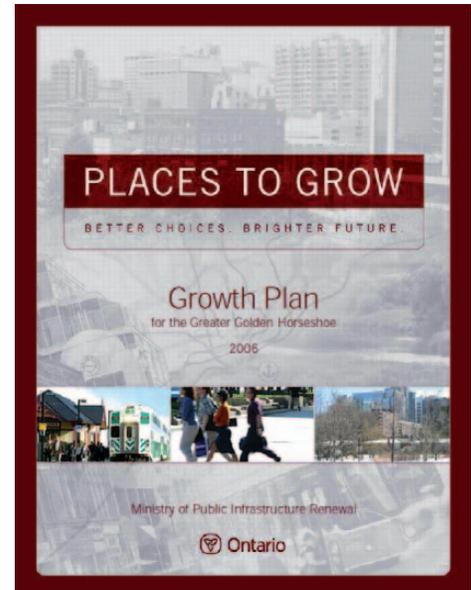
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03

Growth Plan for the Greater Golden Horseshoe:

Tower Neighbourhood Renewal can support the creation of complete communities as envisaged by the Growth Plan for the Greater Golden Horseshoe. These buildings often sit on large, underused parcels of land, and are frequently located in parts of municipalities that have high potential for intensification. Fourteen per cent of Apartment Towers are located within urban growth centres and 55 per cent are located near (within 250 metres) to arterial roads. Mixed-use intensification of these sites can contribute to the complete community goals of the Growth Plan, as Apartment Towers are often isolated, with relatively poor access to key community services, employment, cultural facilities and shopping areas. Intensification provides an opportunity to introduce these types of amenities, particularly in areas identified for future regional rapid transit. Undertaken with thoughtful urban design, the currently fragmented and isolated apartment clusters can become integrated, connected and complete communities.



04

Challenges:

The greatest potential for Tower Neighbourhood Renewal rests in coordinated action among a number of players to address large clusters of Apartment Towers, related to the areas of policy interest discussed above. Taking advantage of these opportunities will require an integrated approach to address a number of challenges.

The GGH is unique internationally by the degree to which post-war Apartment Towers are privately owned and operated - for example, approximately 85 per cent of buildings in Toronto are in private ownership. Furthermore, ownership is fragmented, with large clusters found throughout the region typically divided among multiple owners. In Europe, renewal was often the result of initiatives undertaken by public housing companies, or large private owners, responsible for large estates. Achieving Tower Neighbourhood Renewal in the GGH will require the establishment of an investment framework attractive to market interests, as well as a means by which multiple owners can effectively coordinate renewal efforts.

A related challenge is the high degree of social need associated with the housing stock, paired with private ownership. With this pairing, the needs of at risk residents are often not met, with programs related to newcomers, youth, families, education, training, and access to daily conveniences generally beyond the scope of private owners. Addressing these acute challenges will require partnerships with public service providers, non-profit agencies and community development corporations as part of an affective process of renewal.

Financing Refurbishment:

One of the major challenges is financing physical renewal. The cost of green refurbishment of Apartment Towers is in the range of \$25,000 - \$45,000 per unit. In Europe, governments have facilitated renewal through low interest loans, loan securities and gap financing. In addition, the development of surplus land has been used to create revenue streams for renewal. The financing of renewal projects in Ontario will require a variety of approaches that target a wide range



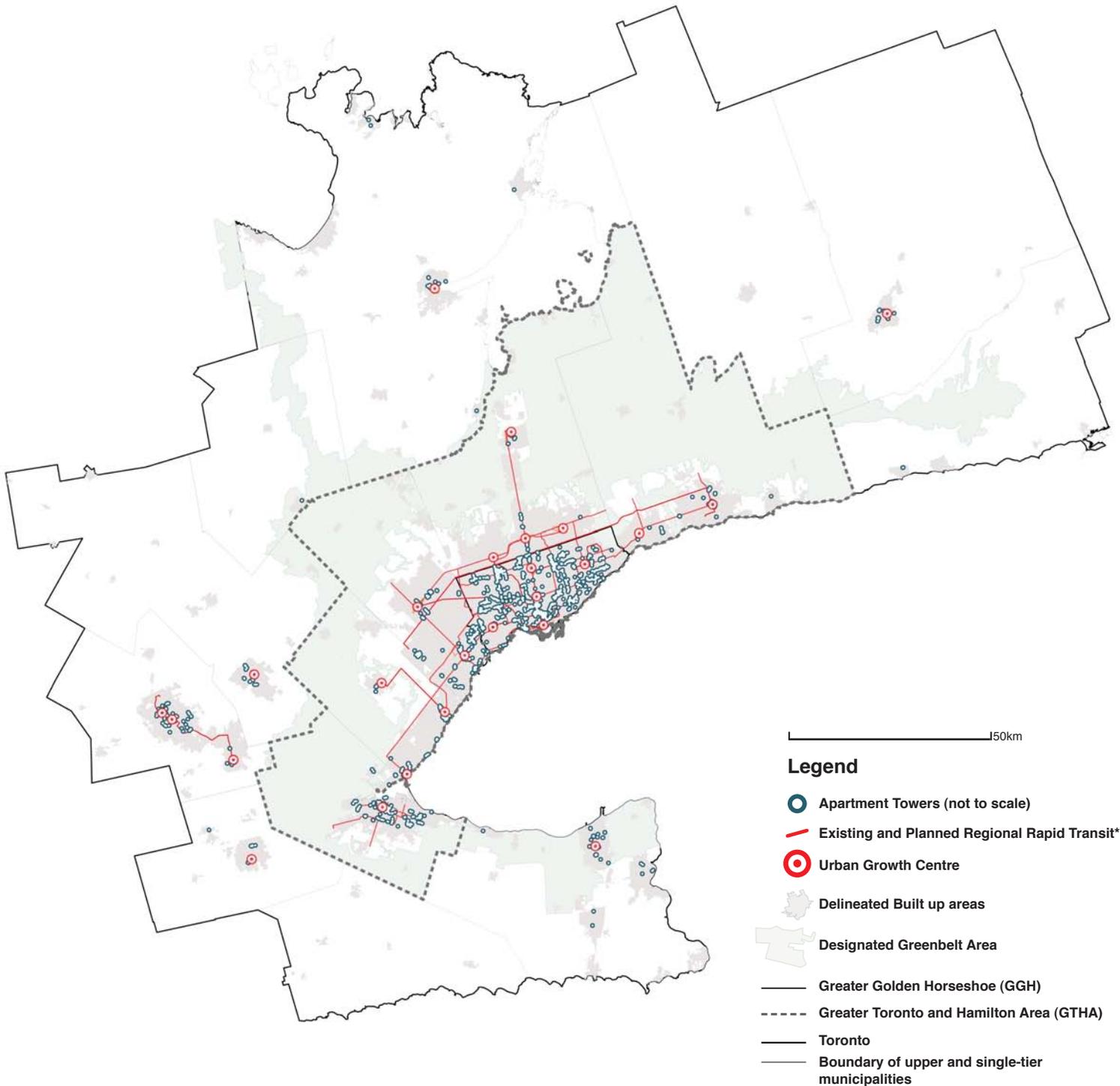
05

Images

- 01) Cover of Metrolinx Regional Transportation Plan, The Big Move: Transforming Transportation in the Greater Toronto and Hamilton Area
- 02) Cover of Go Green, Ontario's Action Plan on Climate Change
- 03) Cover of Ontario's Poverty Reduction Strategy
- 04) Cover of the Growth Plan for the Greater Golden Horseshoe
- 05) Current State of Apartment Neighbourhoods: Fragmented Tower Properties and Blocked Access

Greater Golden Horseshoe

Apartment Towers and Provincial Policy



150km

Legend

- Apartment Towers (not to scale)
- Existing and Planned Regional Rapid Transit*
- Urban Growth Centre
- Delineated Built up areas
- Designated Greenbelt Area
- Greater Golden Horseshoe (GGH)
- Greater Toronto and Hamilton Area (GTHA)
- Toronto
- Boundary of upper and single-tier municipalities

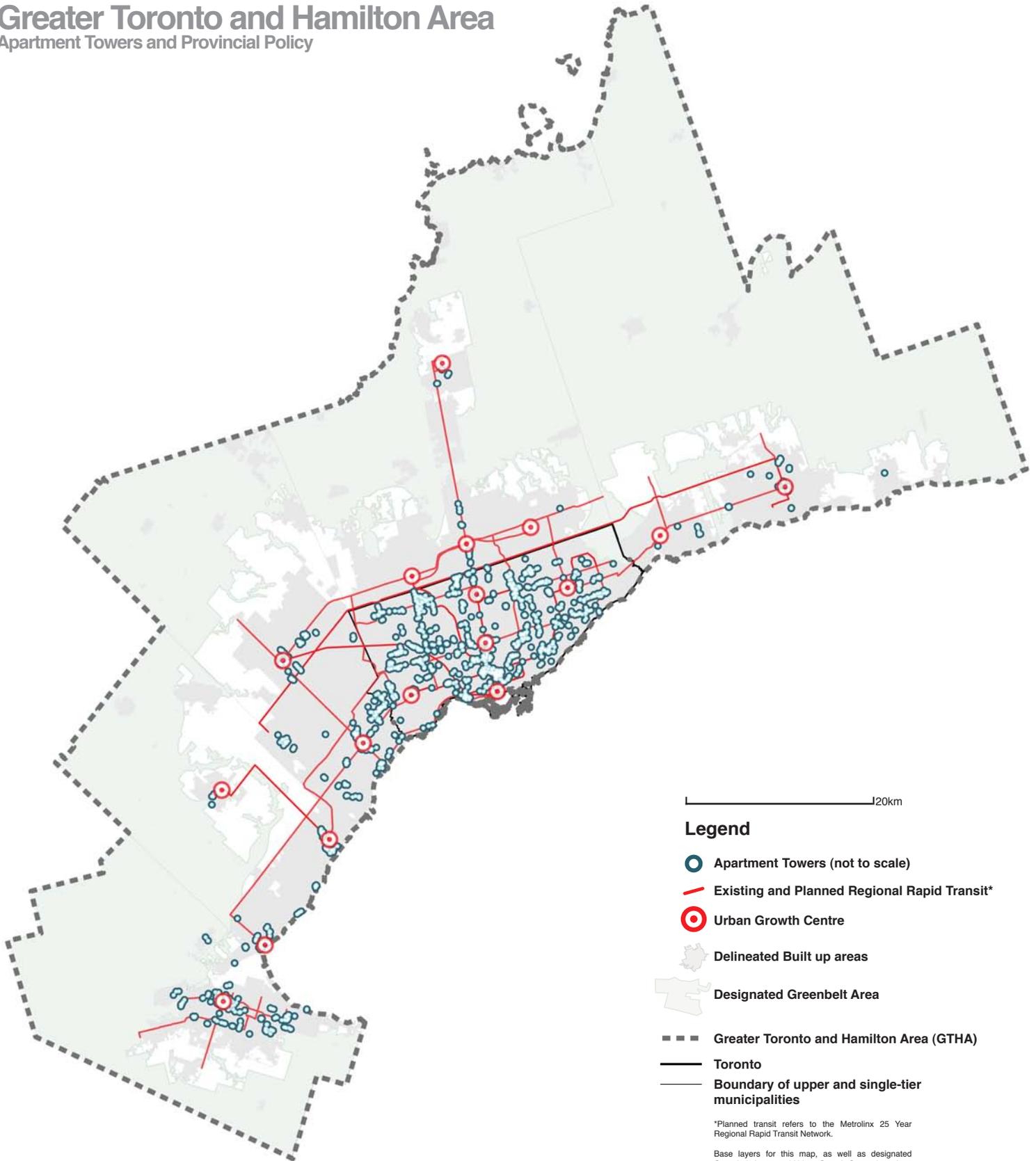
*Planned transit refers to the Metrolinx 25 Year Regional Rapid Transit Network.

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".
 Kitchener/Waterloo Light Rail alignment provided by the Region of Waterloo (TBC).

Greater Toronto and Hamilton Area

Apartment Towers and Provincial Policy



120km

Legend

-  Apartment Towers (not to scale)
-  Existing and Planned Regional Rapid Transit*
-  Urban Growth Centre
-  Delineated Built up areas
-  Designated Greenbelt Area
-  Greater Toronto and Hamilton Area (GTHA)
-  Toronto
-  Boundary of upper and single-tier municipalities

*Planned transit refers to the Metrolinx 25 Year Regional Rapid Transit Network.

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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". Kitchener/Waterloo Light Rail alignment provided by the Region of Waterloo (TBC).

of owner groups. Strategies may include combinations of private lenders, utilities, pension funds and other investment funds; generating revenue streams from intensification; as well as governments guaranteeing long term loans of private lenders, providing gap financing and low-interest loans, and supporting public housing. In July 2010, the City of Toronto Council endorsed the creation of a Tower Renewal Corporation with the mandate to assist owners in financing Tower Renewal projects. The details of the program are still under development.

Planning policy framework:

The current land use planning policy framework presents challenges for achieving Tower Neighbourhood Renewal, with clusters of Apartment Towers often existing within restrictive ‘single-use’ zoning allowances. A supportive land use planning policy framework would need to address coordination of planning across multiple Apartment Tower properties; design guidelines for infill development; green standards for new construction within Apartment Tower Neighbourhoods; infrastructure needs and capacities; community consultation processes that shape renewal outcomes, and the long term management of Apartment Tower sites following renewal.

Ensuring equity:

Another challenge is maintaining housing equity and affordability in the face of Tower Neighbourhood Renewal. This will require methods for ensuring affordability post-renewal, minimizing tenant discomfort during the renewal process, and ensuring that displacement does not occur as a result of renewal. Addressing these challenges may include agreements with owners for rent freezes in exchange for density bonusing and renewal financing, as well as facilitating partnerships with affordable and public housing providers.

Conclusion:

For the past few years, the Government of Ontario has been pursuing a number of policy initiatives that, collectively, are intended to revitalize and improve the sustainability and livability of communities across the province. There are few locations in the province that could benefit more from the province’s complete communities and carbon reduction agenda, and contribute more to their success, than the post-war Apartment Tower Neighbourhoods that have been the subject of this study.

With many Apartment Towers entering their fifth decade, this housing stock now requires significant reinvestment. A prime opportunity exists to make this reinvestment about more than just bringing individual buildings into a state-of-good-repair. Tower Neighbourhood Renewal can bring together refurbishment of individual buildings with a program for environmental, social and economic renewal of entire neighbourhoods. In so doing, it can help to implement provincial policy directions related to creating complete communities and enable a prosperous, equitable and sustainable Greater Golden Horseshoe, and Ontario as a whole.



01



02

Images: International Renewal

01) Refurbished Apartment Tower integrated with new family housing at tower base in Amsterdam’s Bijlmermeer Neighbourhood, the Netherlands

02) New commercial infill, such as fresh food markets between tower blocks in Apartment Neighbourhood in Halle Neustadt, Germany

03) Refurbished Apartment Towers with new infill housing, park, and community facilities in London’s Swiss Cottage Neighbourhood, UK





1.0

Purpose and Approach

1.0 Purpose and Approach

Purpose

The Greater Golden Horseshoe's (GGH's) pattern of urbanization is unique in North America. This is a result of the significant development of modern apartment housing that occurred in the post-war period, roughly between 1945 and 1984, though concentrated between 1960 and 1980.

As a result, the GGH contains a heritage of nearly 2,000 post-war concrete residential apartment towers located in neighbourhoods throughout the region. The quantity and distribution of these towers is unique in the world, and helps give the Greater Toronto and Hamilton Area (GTHA) a density nearly double that of Greater Chicago.

These structures have aged and many of them now require reinvestment. Among the most energy inefficient housing forms in the region, they also tend to be associated with areas of high social need. In Europe, a process known as Tower Neighborhood Renewal has resulted in the refurbishment of apartment towers themselves, and revitalization of surrounding neighbourhoods. Many of the goals of Tower Neighbourhood Renewal – improved energy efficiency, poverty reduction, intensification and urban revitalization – are key areas of provincial interest in Ontario and have been active areas of provincial policy development over the past few years.

The goal of this report is to gather enough data on Apartment Towers and Apartment Tower Neighbourhoods in the Greater Golden Horseshoe to understand the potential for the Province to strategically support the renewal of these neighbourhoods across the region, in a way that aligns with provincial priorities, such as implementing the Growth Plan for the Greater Golden Horseshoe 2006, creating a network of regional rapid transit, as well as priorities regarding energy conservation, greenhouse gas (GHG) reduction, poverty reduction, affordable housing and the green economy.

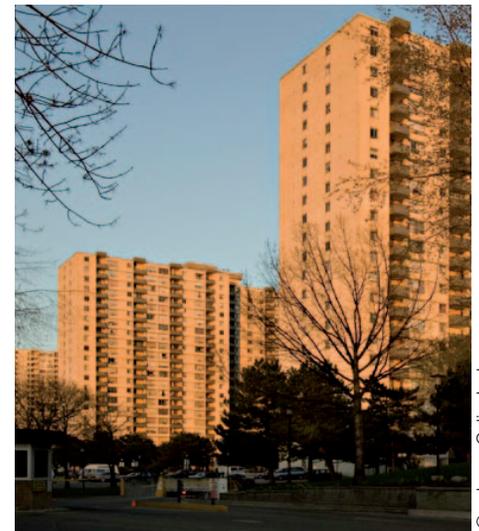
Scope

The focus of this study are the groupings of Apartment Towers known as Apartment Tower Neighbourhoods. Apartment Towers under investigation are the concrete frame, “tower-in-the-park” type multiple residential buildings associated with the post-war housing boom. More specifically, for the purpose of this study, Apartment Towers are buildings meeting these criteria that are eight storeys or greater built between 1945 and 1984. The study does not include the significant number of high-rise buildings built since 1984.

This building type has been identified as having particular attributes that would benefit from the general strategies typically associated with Tower Neighbourhood Renewal in other jurisdictions. The construction methods and architecture were remarkably consistent during the post-war era, and buildings greater than eight storeys* begin to achieve the critical mass considered a pre-condition for various renewal options.

An important feature of this study is that it looks beyond the towers themselves, to consider the overall Apartment Tower Neighbourhood. Many of these buildings were built as part of master planned communities and, as will be seen, they are often clustered together in neighbourhoods. As such, Tower Neighbourhood Renewal in this study refers not just to the renewal of individual buildings, but to the renewal of the

For the purpose of this study, Apartment Towers are residential buildings eight storeys or greater built between 1945 and 1984.



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Tower Neighbourhood Renewal

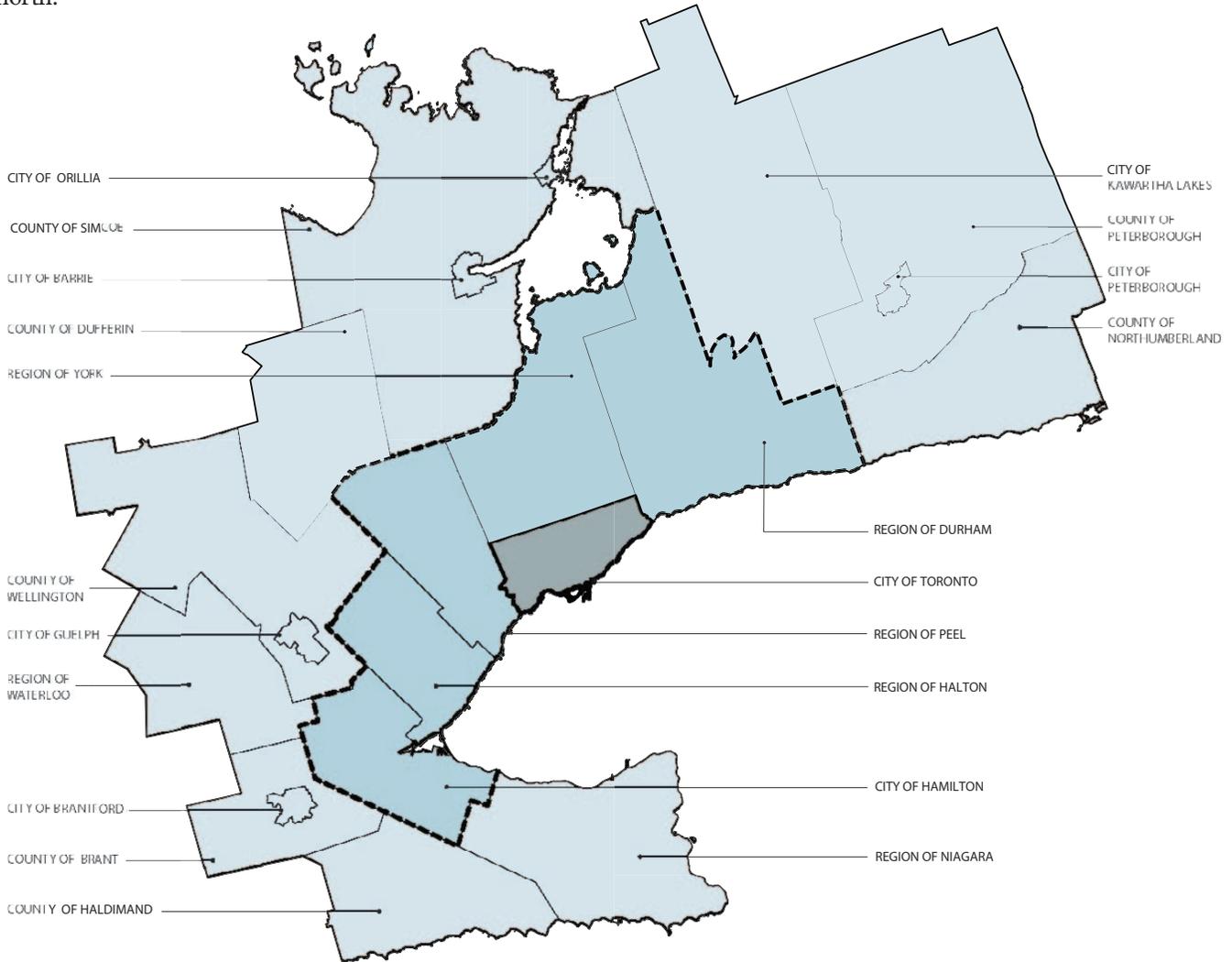
In this report, the opportunities related to achieving complete and sustainable communities within Apartment Tower clusters will be referred to as Tower Neighbourhood Renewal. Described as Tower Renewal in previous documents, Tower Neighbourhood Renewal makes explicit the holistic set of strategies related to the renewal, retrofit, and regeneration of Apartment Clusters, and their intersection with the complete communities mandate of the Growth Plan, prosperity and sustainability mandates of provincial policy, as well as comprehensive sustainable planning in general.

Note

*The Statistics Canada definition of residential high-rise is five storeys and above. For the purpose of the study, buildings five to seven storeys were excluded, with focus placed on Apartment Towers eight storeys and above. Buildings five to seven storeys from the study period represent an additional 1155 buildings in the GGH, or 37.5 per cent of all high-rise buildings from the study era.

Study Area: Greater Golden Horseshoe (GGH):

The geographic scope of this study is the region known as the Greater Golden Horseshoe, as defined under the Places To Grow Act, 2005. The GGH stretches from Peterborough in the east, to Waterloo and Niagara in the west, and Georgian Bay in the north.



Greater Golden Horseshoe (GGH):

Population (2006): 8,071,402

Greater Toronto and Hamilton Area (GTHA):

Population (2006): 6,049,021

GTHA without Toronto:

Population (2006): 3,545,740

Toronto:

Population (2006): 2,503,281

Outer Ring of the GGH:

Population (2006): 2,022,381

Statscan 2006

Legend

- 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.

Methodology

The primary data source for characterizing and analysing the target building stock was 2006 Municipal Property Assessment Corporation (MPAC) data. MPAC data is used for property assessment purposes by the Ontario government and is the most up-to-date inventory of buildings in the Province. Because the precise characteristics of Apartment Towers, as defined for this study, do not relate to a single MPAC building-type code, a series of MPAC codes were selected that generally captured all buildings over eight storeys that include a residential component. A secondary process of visual confirmation was used to verify the buildings that met the initial criteria, as well as identify towers that were missed due to missing or incorrect data in the MPAC inventory.

Other key data sources for primary research included the 2006 Transportation Tomorrow Survey (e.g, transit use, trip lengths and auto ownership) and the 2006 Census for information related to social need and demographics in Apartment Towers. Additional information related to the housing stock was gained through Canada Mortgage and Housing Corporation housing start data.

Supplementary information included relevant provincial policy documents, as well as local and international case studies related to tower refurbishment.

To investigate linkages with areas of provincial policy interest, the study team conducted a series of interviews in December 2009 and January 2010 and a workshop in June 2010 with staff from the ministries of Transportation, Energy, Infrastructure, Municipal Affairs and Housing, Finance, the Ontario Financing Authority and Metrolinx. Staff from the Ministry of the Environment were also consulted.

A detailed description of the study methodology is available in the Technical Appendices.

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2.0

Introduction

2.1 Apartment Towers in the Greater Golden Horseshoe

The building type and planning principals that characterize the post-war, concrete, residential Apartment Towers that are the subject of this study fall generally in line with the ideas of post-war modernism that proliferated the globe during this time period. The building type in question can generally be classified as ‘tower-in-the-park’ – concrete frame, multi-unit buildings surrounding by significant open space (generally between 50 per cent to 90 per cent of the site area) and generally consisting of exclusively residential functions.

Originating in Europe, this housing type proliferated around the globe as a key aspect of international modernist planning and architecture. Able to meet acute housing demand through rapid construction and mass production, while providing a high standard of amenity and modern conveniences, the modern tower block was the predominant housing form of post-war European reconstruction. Variations of this type adapted to local context can be found worldwide, notably throughout Europe, the former Soviet Union, Asia, as well as North and South America.

In the Canadian experience, this building type was readily adapted to the challenges of post-war expansion, particularly in the Greater Golden Horseshoe (GGH). However, unique to the European or American experience, the majority of these towers were privately developed and financed for an eager market of young couples, empty nesters and newcomers to the region, resulting in a significant high-rise housing boom roughly between 1960 and 1980.* In the Toronto area this consisted of hundreds of thousands of units, outpacing the development of the single-family home by a ratio of more than two to one.² These buildings became a significant feature of new communities in the expanding suburbs, and helped characterize the landscape of the modern region.

This is in sharp contrast to the general American experience, where this building type was largely used for inner city public housing, and rarely used in suburban areas or built by private developers. As will be further elaborated in the body of the report, the presence and distribution of these towers within the GGH is an anomaly within the North American context, yet consistent with post-war suburban housing forms found in Europe and elsewhere as a result of the planning trends mentioned above.** This housing legacy represents a remarkable period of regional and community planning requiring thoughtful consideration.

Apartment Tower Neighbourhoods: The Smart Growth of the Post-War Era

The entry of the “tower-in-the-park” type, and the large modern apartment neighbourhood into the Ontario housing scene was the result of a convergence of influences, including:

- innovations by the Canadian construction industry, such as the flying form*** method of concrete frame construction that increased the speed and efficiency of high-rise construction;
- public planning policy that actively promoted high-rise construction in new communities - both to provide the density to maximize infrastructure investment as well as provide new housing options; and
- an able private development industry eager to meet continued demand for apartment housing.

“In Toronto, an unusually large number of high-rise apartments poke above the flat landscape many miles from downtown... this is a type of high-density suburban development far more progressive and able to deal with the future than the endless sprawl of the U.S. ...”¹

**Richard Buckminster
Fuller, 1968**

Development Timeline

*The bulk of the target building type was built between 1960 and 1980 (89 per cent), with 6.5 per cent built prior to 1960 and 4.5 per cent built in the early 1980s. The beginning of the boom coincides with the adoption of the concrete high-rise housing typology in the early 1950s, and the end of the boom relates to a shift in high-rise typology and the slowdown of the housing market in the early 1980s. The youngest building found conforming to the typological criteria was completed in 1984.

International Comparables

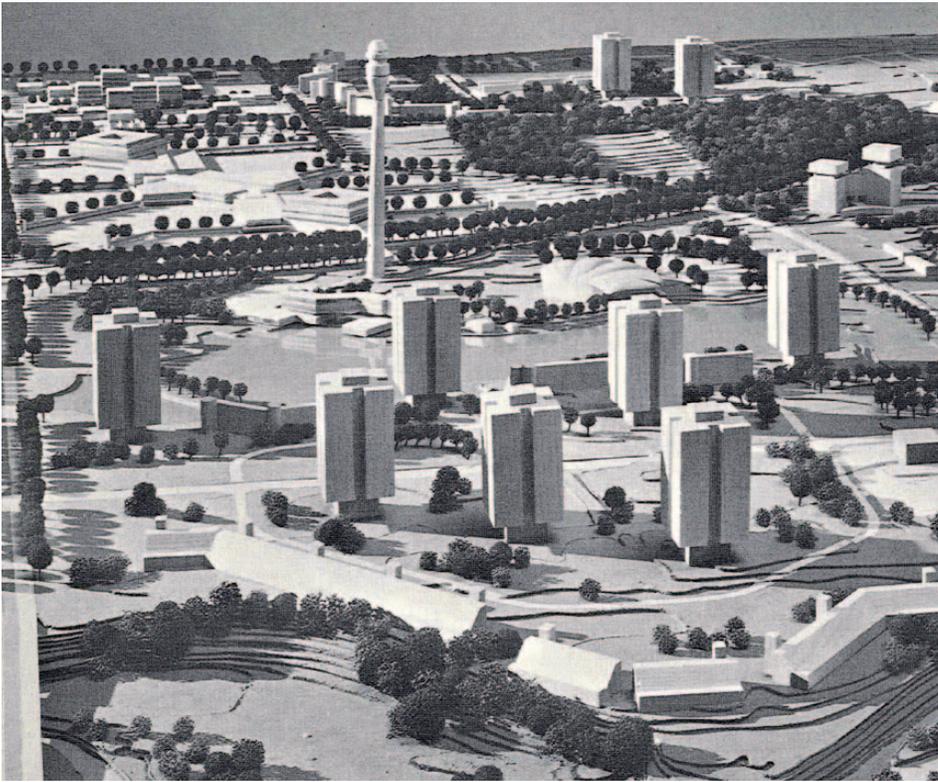
**The GGH’s pattern of suburban Apartment Tower development shares similarities with international jurisdictions, however this comparison is not an exact one. The specific arrangement of towers in the GGH, their method of construction, the volume of private development, and the integration of Apartment Tower clusters with low-rise family housing, shopping centres, and other structures typical of North American suburbia provides a landscape perhaps globally unique. Further comparative analysis is required in this regard.

Flying Form

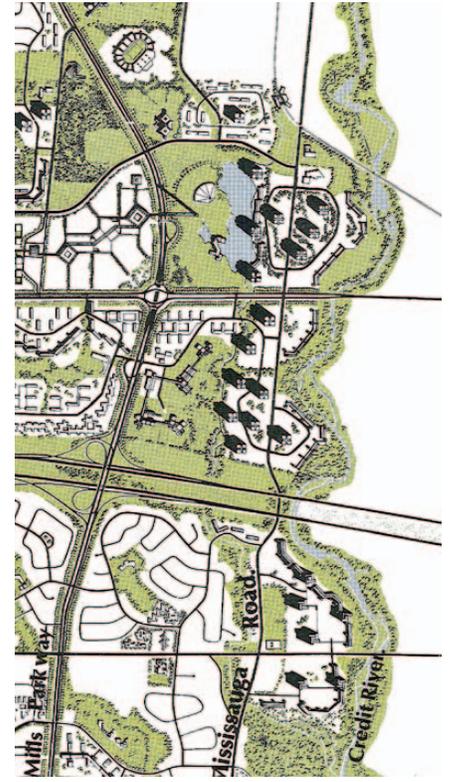
***The flying form is a method of concrete construction where formwork is reused and hoisted from floor to floor for rapid construction. Pioneered in Toronto in the early 1960s, it is standard practice today.

Images

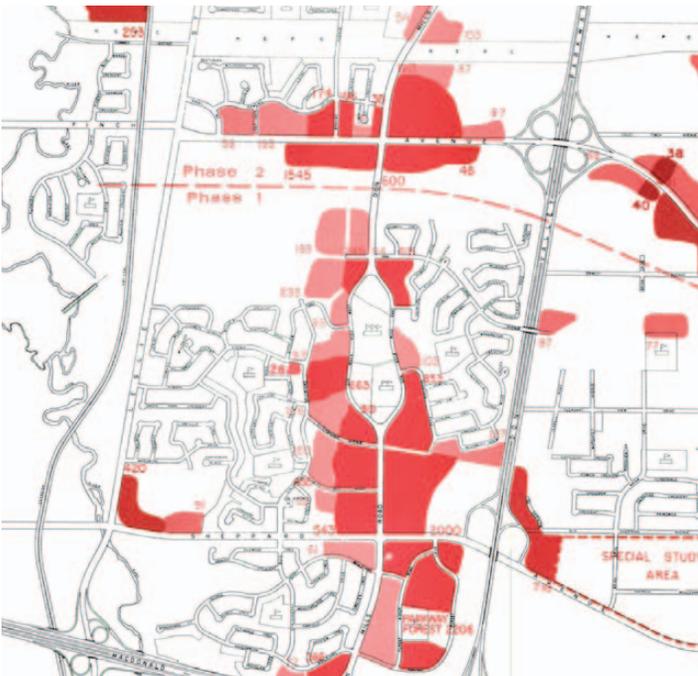
- 01-02) Plan for Erin Mills, Mississauga, 1969
- 03) Plan for Don Valley Village, Toronto, 1965
- 04) Plan for Flemingdon Park, Toronto, 1958
- 05) Plan for Eglinton Flats, Toronto, 1966



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HIGH DENSITY PERMITTED
 LOW DENSITY PERMITTED
 AREAS SO COLORED NOT SUBJECT TO PHASING CONTROLS
 MAXIMUM UNITS PERMITTED



MULTIPLE HOUSING 4

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Other key factors include the criticism of the dense apartment housing conditions that arose in the immediate post-war years (notably along Jameson Avenue³ and St. George Street⁴ in Toronto). Studies of these districts resulted in recommendations that all large apartment buildings have 60 per cent or more open space, and generally conform with what has become known as the tower-in-the-park typology. Additional influences came from both the public and private development communities, who launched large-scale projects in the 1950s which made strong reference to contemporary European projects that were underway as a part of reconstruction. Seminal early projects include City Park Apartments (1954) and Regent Park South (1958) in downtown Toronto.

The key initiator of the high-rise housing boom was the master planned suburban ‘new towns’ of Thorncliffe and Flemingdon Park, located in the northeast periphery of what was then Metropolitan Toronto (planned in 1955 and 1958 respectively). Privately initiated and developed, these projects were the first high-rise apartment satellite communities in North America. They were modelled on contemporary European projects, particularly those in the United Kingdom and Scandinavia, and included retail, employment (in the form of services jobs and light industry), large parks, and large apartment suites for families. As part of the original plan, Flemingdon Park was to house the new CBC headquarters as the anchor tenant of a planned cultural district.

Considered a more ‘responsible use of land’⁵ than the interwar, and immediate post-war, low-density sprawl, higher-density Apartment Tower Neighbourhoods gained acceptance by local planning authorities, and became a mandatory element in new communities.⁶

By the 1960s, the Metropolitan government* prescribed minimum density requirements for new outward growth, in order to maximize efficiencies of public infrastructure – such as sewage⁷ – as well as support public transit, both the local bus system as well as planned rapid transit.** An additional goal was the provision of a wider range of housing choice within new communities.⁸ Furthermore, these high-density districts were to be catalysts for commercial, cultural and community uses to enable ‘self sufficiency’⁹ within suburban neighbourhoods.

The result was the proliferation of high-rises throughout the region. Clusters of towers met density requirements while allowing for large areas of low-rise family housing, natural systems and industrial employment zones. In many cases, such as in Don Valley Village in the then Borough of North York, as much as 50 per cent of all housing was developed as high-rise Apartment Towers.

In the best examples, these clusters were thoughtfully planned as diverse community hubs, adjacent to retail, community centres, employment and transit. In many cases, they were the centres of new communities housing tens of thousands of residents. Examples can be found throughout the former Metropolitan Boroughs as well as the region as a whole, such as Erin Mills in Mississauga, Bramalea in Brampton, and the Ajax City Centre among others.

As the boom progressed, projects varied in quality, from award-winning community plans to less coordinated groupings of towers erected in response to individual development opportunities, rather than as part of any comprehensive neighbourhood planning. In general, the more complicated commercial, cultural and infrastructure investments planned for these neighborhoods (such as rapid transit) were often beyond the scope of the tower developers and, therefore, were not realized. As a result, the projects that typify the boom generally lacked the detailed master planning of the seminal examples that had catalyzed the acceptance of apartment communities in the early years.

“...In Toronto...the continent’s private enterprise-dominated housing system, when coupled with a structure of strong regional planning dedicated to the fostering of high-density ‘hot spots’ in the centre and periphery, succeeded in generating a landscape of massed towers and slabs in open space, almost rivalling the USSR in consistency and grandeur.”¹⁰

— Miles Glendinning

Introduction to the Domocomo
Journal 39 dedicated to post-war mass
housing

Notes

*The policies related to the development of Apartment Towers and Apartment Tower Neighbourhoods within the Metropolitan Toronto planning area are well documented – roughly consisting of today’s City of Toronto as well as portions of York, Durham and Peel Regions. The specific planning history of Apartment Towers in the other GGH municipalities require further study.

**The full rapid transit program anticipated in the early planning for Metropolitan Toronto was not realized, with much of suburban transit limited to the surface bus network. As a result, Apartment Towers were primarily oriented to the arterial road system and designed with the expectation of a high degree of car ownership among residents.

Images

- 01) Thorncliffe Park, Toronto, 1971
- 02) Don Valley Village, Toronto, late 1960
- 03) Thorncliffe Park, Toronto, late 1960s
- 04) Jane and Exbury Towers, Toronto, early 1970s



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2.2 Opportunity of Tower Neighbourhood Renewal

With many Apartment Towers entering their fifth decade, this housing stock now requires thoughtful reinvestment. Current concerns include deteriorating building conditions and performance, as well as trends of increased poverty and marginalization in the surrounding Apartment Tower Neighbourhoods.¹¹ A potential strategy for remediation and reinvestment in these buildings and communities is Tower Neighbourhood Renewal.

Tower Neighbourhood Renewal is a reinvestment and refurbishment strategy that renders aging tower blocks as a key urban asset. The world over, reinvestment has transformed Apartment Tower Neighbourhoods into models of vibrant communities and urban sustainability. Tower Neighbourhood Renewal – through green refurbishment, site diversification and social investment – has been common practice in the European Union (EU) since the late 1990s. European Tower Renewal has led to energy use reductions of 50 per cent in existing buildings, as well as turned formerly isolated neighbourhoods into integrated, diverse and productive city districts through investments in infrastructure, community services, public space, and the addition of new mixed income housing and commercial developments.

Through retrofit and regeneration, the aim of Tower Neighbourhood Renewal is to enable tower communities to achieve their full potential as prosperous, vibrant and sustainable places. As a result, Tower Neighbourhood Renewal is conceived as a comprehensive approach to neighbourhood reinvestment, coordinating desired energy, growth, economic development and livability outcomes.

These efforts are evident throughout the EU with particular leadership in Germany, Sweden, the Netherlands and the United Kingdom. Many of these precedents are explored as case studies throughout this report.

In Ontario, we have an opportunity to learn from the best international examples, while developing innovative solutions best suited to the Canadian urban context.

Tower Neighbourhood Renewal provides an opportunity to review the original intent of this housing and the neighbourhoods in which it lies, and to renew its role as a key housing resource within the GGH in a way that complements new provincial policy directions related to creating complete, compact, transit supportive, low-carbon and equitable communities.

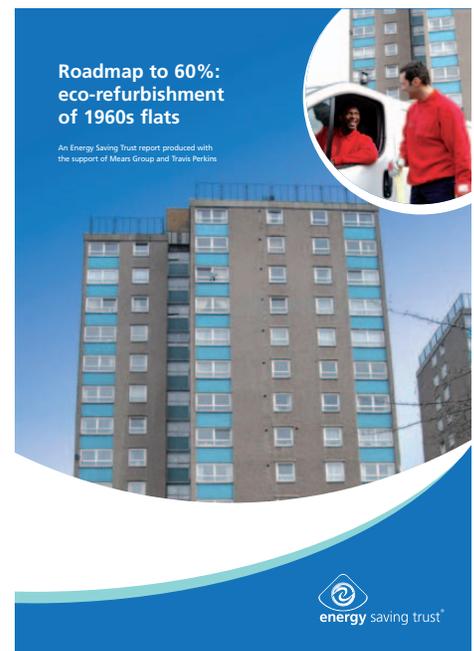
Specific opportunities of Tower Neighbourhood Renewal are outlined below:

Reduce Energy Use

Currently among the region’s most wasteful housing type, refurbishment and renewal of individual towers can reduce greenhouse gas production by as much as 50 per cent. In addition to the renewal of individual buildings, existing Apartment Tower Neighbourhoods provide the opportunity for the establishment of distributed clean energy systems and local resource networks, including co-generation and biomass from waste streams.

Increase Transit Ridership

As concentrated areas of higher density, and with many Apartment Tower residents relying on public transit as their primary means of transport,



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Images

- 01) Eco-Reburbishment Guide, UK
- 02) Sustaining Tower Blocks Initiative, UK
- 03) Swiss Cottage Tower Renewal, UK
- 04) Brunswick Centre Refurbishment, UK
- 05) Vallingby, Stockholm, Sweden
- 06) Hansaviertel, Berlin, Germany
- 07) Polyanka, Moscow, Russia
- 08) Petržalka, Bratislava, Slovakia

Global Precedents for Tower Renewal



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Apartment Tower Neighbourhoods provide an important ridership base for transit. With larger neighbourhoods containing thousands of residents (with some well over 10,000), these areas can provide a critical mass to support planned investments in rapid transit.

Achieve Vibrant, Compact and ‘Complete’ Communities

While Apartment Tower Neighbourhoods have higher density, many currently suffer from a lack of local services, as well as poor access to fresh food and employment opportunities. This is often due to restrictive single-use residential zoning, unchanged since the 1960s. The large, often under-used parcels of land that are typically associated with individual Apartment Towers provide an opportunity to diversify land-uses and give residents of both the towers themselves and the surrounding Apartment Tower Neighbourhoods greater access to services and employment opportunities, as well as to introduce more diversified housing types. Through targeted infill and intensification, Apartment Tower Neighbourhoods have the potential to evolve into vibrant, diverse, and self-sufficient communities.

Address Areas of Social Need

In recent decades, many Apartment Tower Neighbourhoods have become popular housing choices for low income families and New Canadians. These residents tend to have different needs and less mobility than the demographic for which these communities were originally designed. Through the provision of services, amenities and opportunities responsive to these needs, Apartment Tower Neighbourhoods can emerge as dynamic and equitable communities. Strategies could include introduction of community led programming, expanding opportunities for entrepreneurs through land-use diversification, the provision of greater connectivity between tower neighbourhoods and the region as a whole through transit investment, and the general upgrade of this important affordable housing resource.

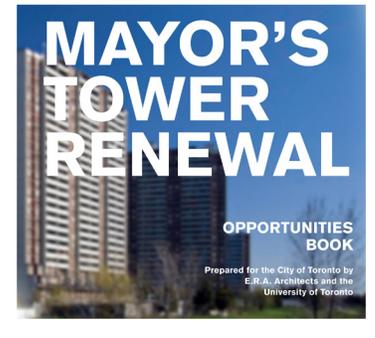
Build the Green Economy

Environmental refurbishment of Apartment Towers represents a significant opportunity for growing Ontario’s green economy, including trade, manufacturing and innovations jobs. With nearly 2,000 towers throughout the GGH, in addition to large clusters in Ottawa, London and other Ontario municipalities, Tower Neighbourhood Renewal represents a potentially significant market upon which to develop a home-grown green economy and related industries, making Ontario a laboratory for sustainable innovation.

Current Local Efforts: Tower Renewal, City of Toronto

The City of Toronto was the first jurisdiction in Canada to embrace Tower Renewal. In September 2008, Toronto City Council endorsed Mayor’s Tower Renewal – an emerging policy direction for the City of Toronto with the goal of integrating Tower Renewal with municipal processes. The program element of Tower Renewal is based on the Opportunities Book, commissioned by the Mayor’s Office and completed by ERA Architects and the University of Toronto, as well as the Mayor’s Report, developed by the Mayor’s Office and an internal City working group. These documents outline a holistic set of values and objectives:

- **Green Neighbourhoods:** significantly reducing environmental impact;
- **Complete Communities:** providing the full range of community services and amenities;
- **Heritage:** retaining the existing building stock and thoughtfully responding to the built, natural and community heritage; and
- **Quality:** engaging in Tower Renewal according to best practice for a well designed and beautiful city.



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Opportunities Book (2008)

In 2010, the Tower Renewal Opportunities Book was awarded a National Urban Design Award by the Royal Architectural Institute of Canada, the Canadian Institute of Planners and the Canadian Society of Landscape Architects.

Images

- 01) Tower Renewal Opportunities Book Cover
- 02) Tower Renewal Implementation Book Cover, City of Toronto, 2010
- 03) The Thousandth Tower, from National Film Board of Canada Documentary Series 'Highrise', highrise.nfb.ca
- 04) Workshop map from Apartment Neighbourhood Walkability Studies, conducted by Paul Hess, University of Toronto, and Jane Farrow, Jane's Walk

The City of Toronto has now established a Tower Renewal Office with the mandate of leading programs and policies for city-wide Tower Renewal and has selected four pilot sites in which to explore renewal opportunities. These pilot projects are intended to help the City to develop the policy framework and skill-set required to establish Tower Renewal on a broader city-wide scale.

Between 2008 and 2010, the City of Toronto commissioned the following studies to develop a city-wide strategy for Tower Renewal:

- Tower Renewal Guidelines, Technical Guide to over-cladding (John H. Daniel's Faculty of Architecture, Landscape and Design, co-sponsored by the Canada Mortgage and Housing Corporation, City of Toronto and the Toronto Atmospheric Fund);
- Tower Renewal Community Energy Plans (Arup);
- Tower Renewal Waste Management Strategy, (Genivar);
- Tower Renewal Financing Feasibility Study, (Morrison Park Advisors); and
- Tower Renewal Financing Implementation Study.

The findings of these reports were culminated into the "The Tower Renewal Implementation Book", endorsed by Toronto City Council in July 2010. Primarily focused on green building refurbishment, the Implementation Book establishes a 'STEP' program for Tower Renewal, outlining how owners can incrementally achieve low carbon buildings through phased building upgrade.

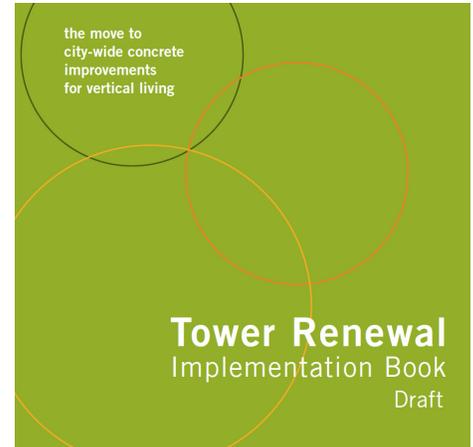
The report also recommended the creation of a city run Tower Renewal Corporation, that would aid in financing of building retrofits through access to pools of low interest financing. The Tower Renewal Office is now in the process of developing the details of the Tower Renewal Corporation, as well as beginning to examine the wider planning policy implications of Tower Neighbourhood Renewal.

Additional Work Related to Tower Neighbourhood Renewal in Ontario

Various complementary initiatives and investigations have been completed or are currently underway related to Tower Neighbourhood Renewal. They include but are not limited to:

- Apartment Neighbourhood Walkability Studies, University of Toronto and Jane's Walk;
- High-Rise Apartment Livability Study, United Way Toronto (Forthcoming, 2010);
- High-Rise Documentary Series, National Film Board of Canada, highrise.nfb.ca;
- Financing and Economics of Affordable Housing Development, CURA, University of Toronto and St. Christopher House;
- Toronto Community Housing Corporation: Tower Renewal Feasibility Studies;
- York University: Global Suburbanism, including post-doctorate positions further studying apartment neighbourhoods and Tower Neighbourhood Renewal; and
- Numerous courses, faculty and student research at a number of local colleges and universities.

To date, considerable progress has been made related to better understanding the current condition of Apartment Towers in the local context, as well as strategies related to renewal, notably environmental refurbishment. However, further work remains to be done in developing a framework to achieve the full scope of Tower Neighbourhood Renewal, particularly related to complete communities.



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Section 2 Citations

- 1 Fuller Geometrics, Architects, Engineers, Planners, "Project Toronto: A Study and Proposal for the Future Development and Design of Toronto", (Cambridge, Mass, 1968).
- 2 CMCH Housing Start Data 3 Faludi and Associates, "Report on Apartments in South Parkdale", (Toronto, 1961).
- 3 Faludi and Associates, "Report on Apartments in South Parkdale", (Toronto, 1961).
- 4 Faludi and Associates, "Report on Building development in the East Annex Planning District" (Toronto, 1963).
- 5 Miles Glendinning, Tower block: modern public housing in England, Scotland, Wales, and Northern Ireland, (London: Yale University Press, 1994) p. 54.
- 6 Metropolitan Planning Board, The Study of Apartment Distribution and Apartment Densities in the Metropolitan Toronto Planning Area (Toronto, 1966).
- 7 North York Planning Department. "The North-East Sector: A Report on a Preliminary Study to Determine Basic Land Use, Road System and Population." North York, Township of North York, 1959, p. 20-21.
- 8 Hans Blumenfeld, Life Begins at 65, p. 240.
- 9 District 12 Plan. Toronto: North York Planning Board, 1965.
- 10 Miles Glendinning. "Ennobling the Ordinary, Postwar Mass Housing and the Challenge of Change" Docomomo 39, Postwar Mass Housing. (Docomomo International, Paris: 2008) p. 7.
- 11 David Hulchanski, The Three Cities Within Toronto: Income Polarization among Toronto Neighbourhoods. 1970-2000. (Toronto: Centre for Urban and Community Studies, University of Toronto, 2007).

