The Canadian Dream? Comparing the Densities of Modernist and New Urbanist Suburban Development – A Comparative Case Study of Don Mills, Toronto and Cornell, Markham

By

Justin Lima

A Master's report submitted to the School of Urban and Regional Planning in partial fulfilment of the requirements for the degree of Master of Urban and Regional Planning

School of Urban and Regional Planning
Department of Geography and Planning
Queen's University
Kingston, Ontario, Canada
April 2022

Executive Summary

This report compares the developments of Modernist Don Mills, Toronto and New Urbanist Cornell, Markham across various built form indicators, specifically gross and net residential density, housing mix, land use mix, and street design and circulation. This report assesses the similarities and differences between the developments, which were influenced by their respective suburban planning theories.

These built form indicators represent key characteristics which contribute to urban design and morphology. Given that both sites were developed on greenfield, or undeveloped, lands on the urban fringe with a comparable area (835 hectares in Don Mills and 973 hectares in Cornell), the sites are suitable for comparison.

Development in Don Mills began in 1953, following the completion of the master plan in 1952. It followed the concepts of Modernism to separate land uses, support residential areas with recreational spaces, employ the Neighbourhood Unit concept, and provide residents with commercial and employment opportunities located in strategic areas. This report utilized statistics from 1965 which encompassed the original development of Don Mills.

Cornell was first conceived in 1988, with the master plan being completed in 1994 by Duany Plater-Zyberk Co., leading New Urbanist designers. They planned a walkable community based on the New Urbanist principles of mixing housing types, pedestrian scaled streetscapes, and enhancing a sense of community. Geographic Information System (GIS) data was supplied from the City of Markham Planning Department to assist in understanding the current built-out statistics of Cornell.

The Cornell Centre area is the future core area of the project. A secondary plan was released in 2008 which planned for 10,000 residents and 5,000 units in the 240-hectare area. The secondary plan was last revised in 2015 and planned for 18,000 residents in 9,000 new units. These figures were used in addition to the current build-out statistics of Cornell to create three scenarios for the comparison of residential density and housing mix in Cornell and Don Mills.

This report found that Cornell currently has a gross residential density that is 29% greater than 1965 Don Mills, with the 2015 plan supporting a residential density that will be 76% greater than the original Don Mills development. Although net densities were not possible to calculate for the unbuilt Cornell area given the lack of GIS data, the current build-out of Cornell has a net residential density that is 71% greater than that of the original Don Mills (Table I).

Area	Units	Residential Gross Area (hectares)	Gross Residential Density (uph)	Residential Net Area (hectares)	Net Residential Density (uph)
Don Mills 1965	8,121	563	14.4	321	25.3
Cornell 2022	8,016	433	18.5	185	43.3
Cornell 2008 Plan	13,016	673*	19.3	N/A	N/A
Cornell 2015 Plan	17,016	673*	25.3	N/A	N/A

***Table I**: Comparison of density figures. The asterisks beside the residential gross area for Cornell's 2008 and 2015 plans indicate that there is no distinction between land use types in the additional 240-hectare area that is allocated for the Cornell Centre area.*

This report also found that today's Cornell has a comparable supply of single detached units compared to 1965 Don Mills, although Don Mills has a significantly higher proportion of high-density units and Cornell has a greater mix of medium density housing. When considering the planned 9,000 high density residential units in the 2015 plan for the Cornell Centre, Cornell will have a greater supply of apartment units and a higher proportion of townhouses compared to 1965 Don Mills, which gives slightly greater preference to single and semi-detached houses (Table II).

		Single Detached	Semi-Detached	Townhouse	Apartment	Total
1965 Don Mills	Unit Count	2842	778	1282	3219	8121
	% of Total Units	35.0%	9.6%	15.8%	39.6%	100%
Cornell Built (2022)	Unit Count	3171	1042	3323	480	8016
	% of Total Units	39.6%	13.0%	41.5%	6.0%	100%
Cornell 2008 Plan	Unit Count	3171	1042	3323	5480	13016
	% of Total Units	24.4%	8.0%	25.5%	42.1%	100%
Cornell 2015 Plan	Unit Count	3171	1042	3323	9480	17016
	% of Total Units	18.6%	6.1%	19.5%	55.7%	100%

***Table II**: Comparison of housing mix statistics.*

Although the primary land use in both Don Mills and Cornell is residential, 1965 Don Mills had a greater supply and mix of non-residential land uses. Also, both developments utilized a street hierarchy system to reduce the amount of traffic on local roads to improve health, pedestrian safety, and reduce interactions with the neighbourhood interior and heavy traffic.

Ultimately, both developments are successful in creating a sense of community for residents while efficiently planning for the allocation of land uses throughout the neighbourhood, despite Don Mills separating land uses and Cornell mixing compatible land uses. The results of the research are useful because despite the supply of statistical build-out tables, there was no previous analysis of planning statistics relating to the original Don Mills development, and published Cornell statistics were based on plans, as opposed to as-built data.