



[A Newburg for the 21st Century](#)

Legislation aimed at containing suburban sprawl in the region of Ontario known as the Greater Golden Horseshoe (GGH) is not resulting in sustainable urban development, particularly in the fast-growing municipalities around Toronto. Some progress has been made, in adding new residential units within existing built-up areas, and in increasing overall population and employment densities on greenfield lands, but the consumption of energy, water, and material resources will climb almost in tandem with population growth. More than 500 square kilometers of rural and agricultural land will have been lost between 2009 and 2031 (less than 20 years from now). Dependence on travel by automobile will remain very high, at a time when the consumption of oil for urban transportation will become more expensive, and produce increasing amounts of pollutants and greenhouse gases as populations grow.

Today's dominant city-building style is to build high-rise residential towers in urban cores, primarily for households without children, a smattering of townhouses, a large number of single detached homes (albeit on smaller lots), separate areas for retail activities and for employment, and road-systems that reflect continued emphasis on travel by personal automobile. No municipality is close to approaching sustainability.



Key components of sustainable urban development are compactness and an intimate mix of residential and non-residential uses, and where most daily trips are not taken by automobile, but by bicycle, on foot or by public transit. For this to happen, urban densities need to be roughly 100 persons and jobs per gross hectare or more, and daily destinations (jobs and shops) must be close to people's homes.

In an effort to explore how high urban densities could go while still remaining family-friendly, the Sustainable Urban Development Association developed a concept called Newburg, an illustrative and descriptive one square kilometre scalable example of a high-density city-building concept for the fringes of urban areas that aims to be environmentally, economically and socially sustainable.

The model achieved an overall density of 9,700 residents and 3,700 jobs per square kilometer, excluding protected natural areas. When extrapolated to a larger population that includes additional components of a complete city (such as universities, hospitals, major exhibition grounds, primary industry, etc.), the overall density reduces to 10,000 or so residents and jobs per km² (26,000 per sq.mi.), which is still several times less land-consumptive than today's typical

suburban cities. In some ways, Newburg is a North American adaptation of old pre-industrial European towns, where buildings and housing units are connected, workplaces and shops are just around the corner, and walking and cycling are the dominant forms of transport.

The principal characteristics of the Newburg model that serve to increase density and sustainability are:

- Avoidance of almost all single-storey non-residential construction in favour of multi-story mixed-use buildings;
- A reduction in the percentage of single detached homes to a very small proportion, replacing them with a mix of attached homes (row houses) with private backyards;
- Apartment-style residential accommodation as a significant share of all residential units (about 50% of all units);
- Minimal or no setback requirements for most buildings (non-residential and residential);
- Replacement of most private parking spaces on non-residential properties with shared public parking lots and garages;
- Reducing transportation space as a percentage of total space, in recognition of higher modal shares for public transit, walking and cycling, and shorter trip lengths;
- More efficient provision and use of parkland and open space;
- The integration of non-residential uses into the community in ways that support active transportation.



The model's housing mix reflects a rebalancing to respond to future demographics, affordability issues, and the limited housing choices that currently exist in most of today's suburban communities. Apartment buildings in Newburg are generally low-rise and suitable for a range of



household sizes, as are the ground-level homes, almost all of which have well-sized private backyards. Single detached housing is included in token numbers only, in response to their relative oversupply in pre-existing communities.

The Newburg example's intimate mixing of uses enables transportation system requirements to move significantly

away from the use of private automobiles and towards walking and public transit as principal modes of transportation. It is estimated that a Newburg-style area extended over a multi-kilometre area could reduce the automobile's share of all daily trips by residents to 55% or less, and those trips would be, on average, much shorter.

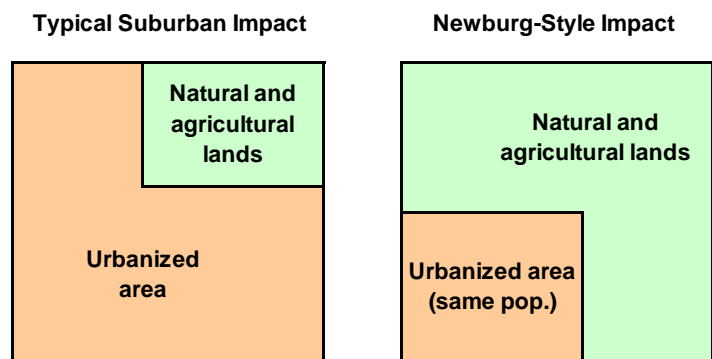
Newburg also introduces the concept of the *pedway* as a significant design component in residential areas. Where homes have garages facing rear laneways (as many in the model do), roads in front of these homes are replaced by a 12- to 14-foot wide pedestrian way and small private yards as buffers, creating a pleasant pedestrian environment interconnected throughout the Newburg site.

The Newburg model proposes that most non-residential uses, including large and small retail, office and institutional uses should be blended into the community rather than separated into distinct employment zones. Retail and office uses in the Newburg example are often mixed into multi-storey buildings, many of which are also topped by residential units. This increases the visibility of small business to the community. Contrary to today’s suburban development practices, the Newburg model also blends small industrial operations into the community if they meet performance standards for noise, pollution, truck movement, etc. The overall effect is that up to 12,000 jobs can potentially be accessed within a one-kilometre radius of one’s home.



Most parking lots are shared by surrounding non-residential areas. Outdoor space includes private yards, small parks, schoolyards and athletic fields, and protected natural spaces that may be nearby. On a per capita basis, stormwater runoff is far less than what it is in typical suburbs, excluding private greywater systems that may be implemented. Overall, energy use is much lower; the density, mix of uses, attached homes, multi-storey construction and the inclusion of renewable power generation can reduce fossil fuel energy expenditure for indoor climate control and transportation by 60% or more, which in turn strengthens local economies and reduces the potential impacts of future energy shocks.

An important benefit of the Newburg model is that two to three or more times as much rural land is spared from urbanization compared to traditional development. As populations grow and climate change threatens agricultural productivity, land preservation becomes a food security issue.



The Newburg style can be applied at the fringes of urban areas throughout the GGH, and elsewhere. The design reflects a belief that the family-friendly, vibrant, safe, and walkable urban environment of the Newburg style is highly marketable. Because it enables more building units to be built per hectare, and because net buildable area per hectare is larger than in typical suburban environments, it is profitable for builders.

The complete 93-page Newburg document is available for purchase at www.suda.ca.