

From: soulart@yorku.ca [mailto:soulart@yorku.ca]
Sent: Wednesday, December 12, 2007 11:11 AM
To: Regional Clerk
Subject: Presentation to Planning and Economic Development Committee

Dear Denis Kelly,

My name is Leslie Luxemburger; I am the Environmental and Urban Development Specialist with the Sustainable Urban Development Association (SUDA), a charitable corporation committed to a healthy natural environment through healthy city building and sustainable urban development. As per our discussion, I have enclosed information on the presentation content, SUDA's purpose and projects, the sustainable development model called "Newburg", and the preliminary results of SUDA's Housing Alternatives Acceptability Study.

At this time we are meeting with municipal, regional and provincial planning staff and councilors to discuss the options available for greenfield development within the 905. The planning staff, councilors, and politicians we have met with so far, have expressed interest in SUDA's projects and research and are considering our recommendations. Recently SUDA staff met with MAH Deputy Minister, John Burke to discuss our solutions and recommendations for sustainable development.

I would like to make a presentation to the York Region Planning and Economic Development Committee on January 10, 2008, at 1pm, in addition to the Transit Committee on January 18, 2008 at 9am. These presentations will consist of critical issues facing York Region and other Regions in the 905, and the sustainable development and sustainable transportation options available to York Region.

Thank you for your consideration. I look forward to these next steps.

Kind regards,

Mr. Leslie Luxemburger, BES
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Sustainable Urban Development Association

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SUMMARY OF NEWBURG PRESENTATION to York Region council York Region, Planning and Economic Development Committee January 16, 2007, 1pm

1. Introduce SUDA purpose and approach to work
2. Introduction of SUDA programs and projects
3. Discuss critical issues facing York Region
4. Sustainable development options for York Region
5. Tracking progress in sustainable development
6. Questions and Answer period

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September 5, 2007

HAAS - Some Initial Findings

400 responses to the HAAS were received and an analysis has been undertaken. The analysis has shown some significant information, including for example:

- Although 63% of respondents reported living in a single detached house, 56% overall said that living in a smaller condominium apartment would be 'acceptable' or 'may be acceptable', 53% would accept or may accept living in a mid-size townhouse with a large backyard, 52% said a large condominium apartment would be acceptable or may be acceptable, and 50% responded this way to a large townhouse with a large backyard.
- 90.6% said a healthy natural environment, less pollution and a stable climate is 'very important' or a 'must have'.
- 59.6% responded that having daily destinations within walking distance is 'very important' or 'must have'.
- 29.2% said that owning a single or semi-detached home is a 'must have', and 35.8% said this is 'very important'.
- To the question about whether rising energy prices would affect their choice of housing, 29.7% responded 'very much', while 46.7% responded 'somewhat'.
- 66.9% of respondents are willing to pay additional taxes to fund improvements to public transit.

However, these findings are interim only, and not to be taken as final. Accuracy is limited by the sample size (on an overall basis and for segments, such as 905/416 split), and will improve with additional responses.

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The following represents a brief outline of SUDA's purpose, approaches, projects and outreach activities. It is meant to complement existing information available on the website: www.suda.ca.

SUDA's Purpose

SUDA's mission is to foster a healthy natural environment by encouraging city-building that is highly efficient in land, material and energy resources, and that is also characterized by sustainable transportation.

We do this by working with stakeholders to increase understanding and acceptance of the importance of sustainable urban development practices; by gathering information and undertaking limited research; and by communicating this information to targeted audiences.

Sustainable Urban Development

SUDA believes in the principle of environmentally sustainable development, which was defined in the World Commission on Environment and Development's report "Our Common Future", as: *"Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs."*

Achieving sustainable urban communities involves understanding the interconnectedness of economy, society, and environment. A community is unsustainable if it consumes resources faster than they can be renewed, produces more waste than natural system can safely process, or relies on distant sources for its basic needs.



One of the most important factors in building and maintaining a healthy natural environment - and therefore our well-being - is the kind of community in which we live. The physical forms of our cities, towns and neighbourhoods, our transportation systems, and the ways we use energy, material and water resources have profound effects on environmental sustainability, and on our daily lives.



Today we are facing a number of serious problems linked to unsustainable urban development. For example:

- Energy prices are projected to rise rapidly over the foreseeable future, and the risk of shortfalls in petroleum supplies is increasing.
- The farmlands that North Americans depend on are being overrun by low-density suburban development.

- Severe weather events caused by rapid global warming threaten the viability of natural ecosystems. Virtually every ecosystem is in decline.
- Urban growth continues to add more motor vehicles onto local and regional roads, creating pollution and congestion.

Pollution from transportation, industrial and other urban activities is affecting the lungs and general health of people of all ages.

Funding

The Sustainable Urban Development Association is supported by the Ontario Trillium Foundation. SUDA was granted a Trillium grant for the period of 2007-2008. Being a small charitable corporation, we are limited in terms of resources and we operate on a voluntary board.

Focus areas

SUDA is concentrated on implementing sustainable development policies, guidelines and plans for green field sites within the 905 area. Areas of interest include:

- sustainable transit/public transit; integrated transit systems; multi-modal transportation
- mixed use, compact communities
- Pedestrian friendly and child friendly communities
- Green Development guidelines for Green field sites within the 905
- Appropriate development: ecologically sensitive and human scale
- Reduction in GHG emissions through carbon neutral and energy efficient development
- Socioeconomic valuation of lands;
- Growth management modeling and sustainable urban development indicators
- Protecting natural open space and agricultural/farm lands within 905

SUDA is focused on increasing the level of awareness of sustainable urban development options available to municipalities and residents within the GTAH. This means stakeholder outreach, education campaigns and sharing of information, as well as networking.

Sustainable Urban Development means:

- Healthy, complete communities through land use planning and design
- Mixed use, compact development that meets the life cycle needs of residents within those communities
- Human scale, pedestrian oriented land use
- Public transit networks; regionally integrated transit networks
- Shift from culture of consumption to culture of conservation and proper valuation of land
- Exposure to energy shocks is reduced
- Traffic congestion is reduced
- Household & local finances improve
- Air and water are cleaner; healthier

- Communities are safe and vibrant
- Stronger economy (including utilizing environmental jobs, service sector jobs, creative class and sustainability businesses, including eco-industrial parks)
- Food security improves
- Reducing energy demand
- Sparing rural lands and natural lands
- Interconnected trail networks for residents to enjoy
- Reducing vehicle-kilometers from current levels
- Reducing environmental damage from industry, household waste
- Increased human wellbeing and ecological integrity of natural environment
- Source water protection through low impact development and ecologically and socially appropriate development

The key is to increase density targets and growth projections through infill, intensification and compact urban form within the urban boundary. It is possible to achieve density targets of 10,000 people and jobs or more per km² of land through the Newburg concept. Implementation of the Newburg can happen through individual sustainable development test sites, such as those implemented by CMHC, for their Net Zero Energy Healthy Housing Program (NZEHH), which is consistent with Mississauga's vision for sustainable development test sites within its urban core/down town area, and along major public transit corridors. (Enclosed is information about the program).

This will work collaboratively with the Leader in Energy and Environmental Design program (LEED-RD and LEED-ND), as well as Green Development Guidelines. A feasibility study for several low impact development, sustainable communities in Mississauga, should include a 1 km² test site for Newburg.

Future Work

SUDA is developing specific measurement tools to evaluate progress made in sustainable development. In addition, SUDA will implement Phase II of its Housing Alternatives Acceptability Study (HAAS); it will run from January 2008 to July 2008 and result in further empirical evidence supporting the need for mixed use, compact, complete developments that are pedestrian oriented, within the GTAH. This will hopefully help set a precedent for higher density development, and ecologically sustainable land use practices in Peel Region.

SUDA will continue with its outreach and education work, helping raise awareness about viable sustainable development alternatives for municipalities. SUDA will continue to provide input into the OP Review and Strategic Plan Update for each municipality within the 905 belt (suburbs) of the GTAH. In addition, SUDA is seeking funding to implement its Newburg sustainable development model (currently in conceptual phase).

Next Steps

- Presentation of Newburg concept to City of Mississauga Environmental Advisory Committee
- Presentation of Newburg concept to Planning and Development Committee
- Presentation

- Presentation to other relevant committees and Mississauga council
- Continued input into OP Review and Strategic Plan Update for Mississauga (Building a City for the 21st Century)
- Continue to update planning staff and council on our progress and programs
- Meet with councilors and provide specific recommendations and solutions, as well as voice concerns
- Provide policy guidance, input into development review and land use planning



Benefits of Well-Designed Sustainable Urban Communities

Mixed Use Environments with 100 or more persons and jobs per gross hectare

(List is in random order)

1. More efficient public infrastructure and lower infrastructure costs (Less road and utility infrastructure per capita)
2. Reduced costs of servicing/maintaining public infrastructure
3. More effective use of public facilities (better access to libraries, parks, etc.)
4. Higher revenue-to-cost ratios for public transit services
5. Better transit services enabled (both local and commuter express services)
6. Lower pressures on property taxes
7. Higher property taxes per gross hectare
8. Reduced per capita energy consumption for public services
9. More efficient delivery of water and wastewater services (e.g. shorter pumping distances)
10. Buildable land supply time horizon extended (can be more than doubled)
11. Improved profit margins for land developers (more building units per hectare)
12. Possibly less traffic congestion (modal shifts to walk/transit/cycle; shorter trip lengths)
13. Greater potential for shared (public) parking; reduced parking requirements for property owners
14. Reduced impact of energy price shocks to public and private sectors
15. Household energy savings for HVAC (more attached and multi-unit buildings)
16. Improved affordability for housing (town homes, apartments less expensive; lower home maintenance costs)
17. Better mix and choice of residential accommodation (better match with demographics, household types)

18. Reduced costs for transportation (less reliance on / ownership of vehicles)
19. More vibrant public / civic environment; improved social interaction
20. Public safety / crime prevention benefits of more 'eyes on the street'
21. Diverse and walkable mixed communities attract business and enhance the creative/innovative spirit
22. Improved viability of arts and culture (better access; larger talent pool in community; public subsidies more affordable)
23. Increased tourism and ecotourism (which is an under explored and highly important amenity for local community sustainability and economic development)
24. Lower household expenditures enable better trade-offs between work and family life
25. Less overall hardship for households and subsequent higher wellbeing index, quality of life (more efficient means of measuring social progress and sustainability)
26. Improved viability for small business (improved access, visibility, affordability)
27. Reduced HVAC costs for business (fewer single-storey, stand-alone structures)
28. Closer access to jobs and services within the community (average half distance than at 50 residents and jobs per ha); more choice within a given area
29. Larger, more diverse labor pool for business nearby
30. Greater sense of community responsibility by business (less isolated from community)
31. Improved personal health due to more walking, less driving
32. Reduced per capita emissions of greenhouse gases from vehicles and buildings.
33. Buildings and HVAC (can average more than 40%)
34. Reduced per capita emissions of toxins from transportation and property sources (e.g. fewer lawn chemicals and less non-point source pollution)
35. Greater potential for efficient delivery of energy (e.g. district heating/cooling); greater opportunities for green design and infrastructure (e.g. solar hot water heaters, wind turbines).
36. Reduced storm water runoff through green design
37. Reduced consumption of material resources for construction of buildings and reduced use of toxic materials in construction (industrial ecology)

- 38. Preservation and conservation of even more rural and agricultural lands; more natural habitats preserved for wildlife
- 39. Improved personal health and fitness from less air pollution and more opportunities for recreation and outdoor exposure to natural open space and greenways
- 40. More consistent school enrolments (more diverse mix of age cohorts within catchment area)
- 41. Less school busing required
- 42. Recognition for true political leadership and planning excellence in progressive, sustainable city-building
- 43. Communities built upon innovation, creativity and cultural integration

Prepared October 2007

Sustainable Urban Development Association

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NEBWURG CONCEPT

1.0 Introduction

Preliminary work by John Stillich on the Udonia Concept (also known as the Newburg concept) for greenfield development indicates that 8,000 residents and 4,000 jobs can be accommodated per square kilometer (20,000 residents and 10,000 jobs per square mile) in a safe and desirable manner on a large scale. The concept includes allowance for a full range of residential, nonresidential and public uses that comprise complete communities.

2.0 How it works



What kind of Community is Udonia?

Udonia is a compact urban development concept suitable for greenfield development at the fringes of urban/suburban areas. It is intended to be highly efficient in land, energy and material resources, yet meet the needs of a very wide variety of households and lifestyles. It is intended to be a blend of the best of older European and North American cities and towns.

It is a highly-integrated community model, with a close mix of residential and non-residential uses. It is not focused on high-rise residential living, but on a mix of low-rise buildings and ground-level homes with backyards suitable for families. Access to employment and daily services is much less dependent on use of personal automobiles.

Residences

Udonia's residential component is a roughly 50/50 mix of ground-level homes with private yards, plus (mostly) low rise multi-unit dwellings as a good demographic fit for the future, meeting needs of families with children as well as adult-only households. The concept suggests that the great majority of single-detached homes can be effectively replaced by well-designed attached homes with relatively large backyards, in quiet and neighbourly surroundings. The Udonia (Newburg) concept also brings back the older tradition of residences atop retail and office buildings.



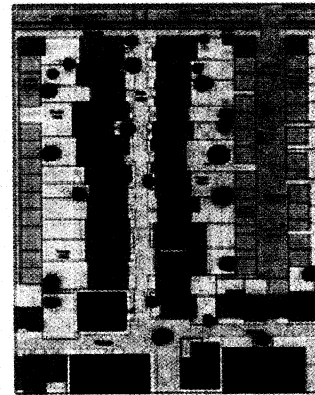


Commerce

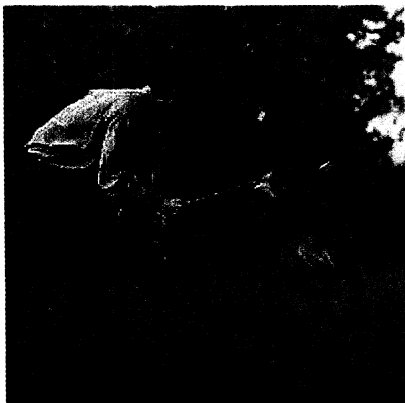
The concept also addresses the need to end the space and transportation waste inherent in single-use non-residential zoning by showing how multi-use, transit-oriented, multi-level building forms can be meshed into the urban environment. Retail, office and other employment zones are largely eliminated, and are blended into high density main street environments, with the exception of noxious industrial activities. Uses with the highest human occupant density are located at transit intersections.

Transportation and Pedways

The Newburg concept designs transportation infrastructure to accommodate a reduced need to use personal automobiles over time. If implemented over a large area (several square kilometers), the number of kilometres traveled per capita by personal automobile can be reduced by an average of up to 50%, depending on level of investment in public transit services, and the adjacent urban environment. The high resident and employment densities of the Udonian model enable viable and superior transit services.



Newburg introduces the "Pedway" concept, an extensive interconnection of pedestrian rights-of-way that replace most roadways fronting homes. Whenever home frontages are served by pedways, garages are moved to a rear laneway, and most front yard space is eliminated. Parking requirements across the board are significantly reduced, the ratios of floor space to lot size are increased significantly (doubled or tripled for non-residential uses), and parking is mostly public and shared by the community.



Green Spaces

Open space within the built-up area is located and sized to be more effectively used and shared, with parkettes along pedestrian corridors, and athletic fields linked to schools and community centres. The overall population density of the community ensures that larger, contiguous natural areas exist outside the urban boundary, as protected habitat or for recreational use.

Eco Industrial Parks

The vision within the GTA is to create networks of industrial ecology cooperatives between different industries, whereby one industry produces wastes which another industry can recycle and all industries involved share energy through cogeneration, and reduce their waste generation through recycling of materials between each industrial operation. These “eco-industrial parks” are in existence in some parts of the world, namely Germany, Sweden, Holland, France, California, Alberta and more such operations are emerging in response to the oscillating energy prices of crude oil, the inefficiencies of the current industrial sector, and as a way to prepare for the coming energy crises, which will affect the global marketplace in many ways. In fact Alberta, Canada is a leading eco-industrial area in the world. Through energy shocks and preventative measures such as end of pipe treatment, pollution prevention technologies and locally produced energy that is de-centralized, energy efficiency goes up and waste production goes down.

The eco-industrial park will include a network of some 1000 industries/firms who, through industrial ecology and pollution prevention, have committed to reducing their green house gas emissions (GHGs), reducing their ecological footprint, reducing the urban heat island effect and restoring ecological habitat adjacent to their operations. This is an important step in proper storm water management and in helping Canada to meet its Kyoto commitments.

As per the Briefing Notes for Etobicoke-Mimico Watersheds Coalition Members- September 2007 (sec. 7.8.4):

“TRCA is leading the way with this program and through this program will create the largest eco-industrial network in North America. The Eco-Industrial Park is a partnership between TRCA, Region of Peel, Greater Toronto Airports Authority (GGTA), and local municipalities. This new project has been created in 2007 following the completion of the GTTA Etobicoke Living City Project”.

The essence of eco-industrial networking is improving the financial and environmental performance of businesses. This is achieved by reducing energy, waste and water-use through efficiencies and developing synergies between companies, where one company’s waste is another’s feedstock.

Eco-industrial parks are the framework within which eco-industrial networking takes place. An eco-industrial park puts an emphasis on fostering networks among businesses and the community to optimize resource-use and reduce economic and environmental costs.

In an eco-industrial park value is added to businesses when waste products, water and energy are recycled back into the system. Cooperation results in a conservation of resources, as well as lower disposal and production costs for participating businesses. Eco-industrial parks can go beyond inter-firm resources-

use to include numerous concepts, including pollution prevention, integration into the natural environment, green building design, eco-development, joint job training and research and development.

Overall, the concept is a community of businesses that cooperate with each other and with the local community to efficiently share resources (information, materials, water, energy, infrastructure and natural habitat), leading to economic gains, a healthy natural environment and equitable enhancement of human resources for the community”.

Greening retail

This is a new partnership between the Toronto Region Conservation Authority (TRCA) and the retail sector. There are programs in place to promote energy and water efficiency within each municipality, at the scale of the individual retailer. Through subsidies and tax incentives, retailers are encouraged to reduce their ecological and carbon footprint through pollution prevention measures. This works collaboratively with the Toronto Sustainability Program being operated by the Ontario Center for Environmental Technology Advancement (OCETA: www.oceta.on.ca).

The Sustainable Urban Development Association (SUDA)

Presentation to York Region
Planning and Economic Development
Committee
January 16, 2008



SUDA's Purpose

To advance and foster a healthy natural environment by providing information about better city-building.



York Region's accomplishments in sustainability

- Exceptional environmental programs and services
- Consolidated Growth Management Strategy, Sustainability Plan & Vision 2021
- Transit Oriented Development Guidelines
- Incentives for green design
- Natural heritage system
- Corporate and community outreach
- Mixed use, higher density areas in CBD's
- Smart commute & ride-share
- Some renewable energy projects

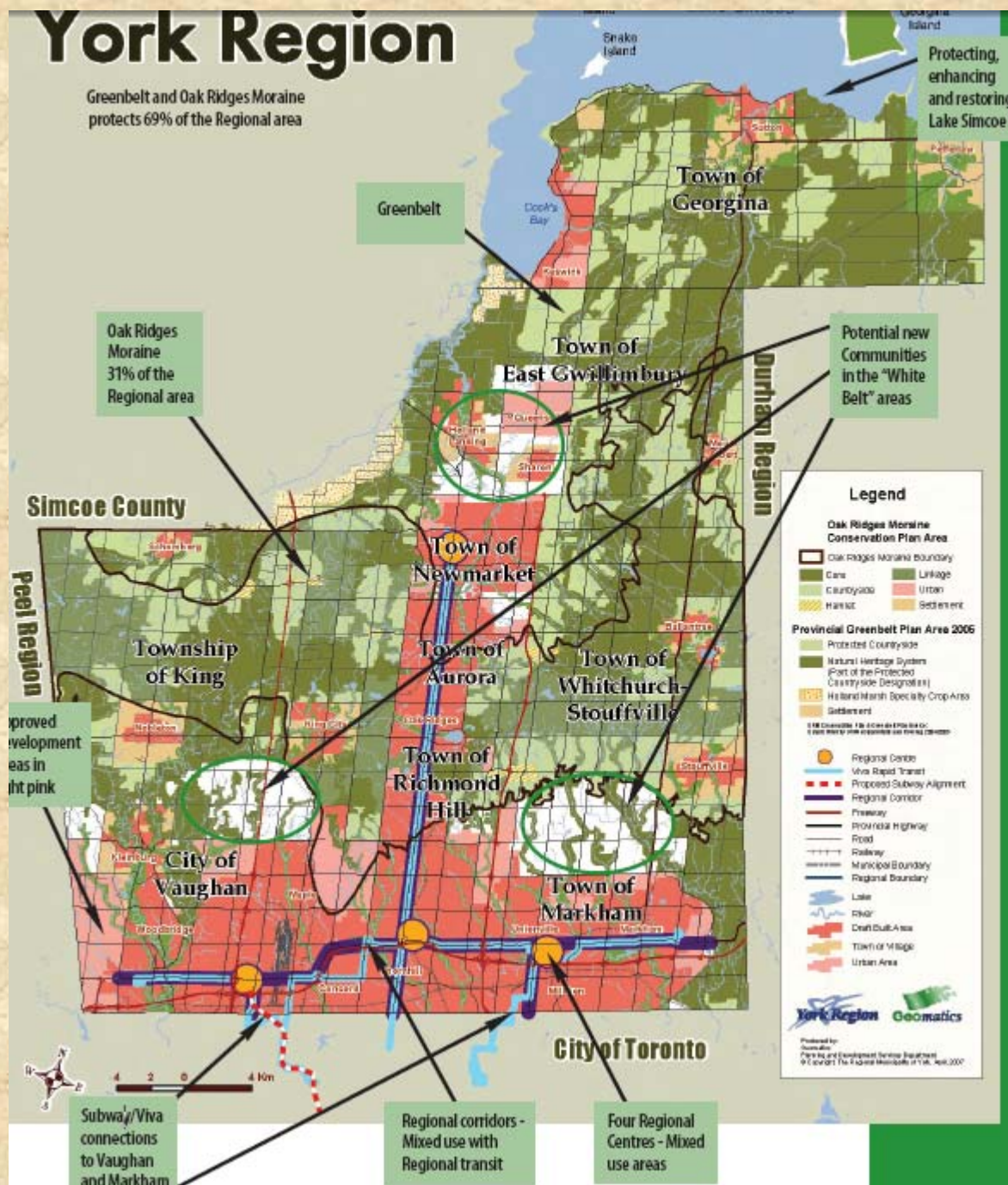
Areas for improvement

- **Climate change and energy crises**
- **Compact, mixed use development at density of 100 p+j/he or more**
- **Land Supply & Population Growth**
- **Land use highly car dependent**
- **Improve public transit**
- **Intensification targets above PTG**

York Region

Greenbelt and Oak Ridges Moraine protects 69% of the Regional area

Protecting, enhancing and restoring Lake Simcoe



Total Occupied Households by Structure Type, June 2006

	Estimated % Mix of Occupied Households				Total Occupied Households
	Singles	Semis	Rows	Apts	
Aurora	67%	8%	16%	9%	15,488
East Gwillimbury	90%	1%	3%	5%	6,942
Georgina	85%	2%	5%	8%	15,401
King	93%	1%	1%	5%	6,552
Markham	72%	6%	11%	12%	78,007
Newmarket	63%	9%	12%	17%	24,596
Richmond Hill	65%	4%	14%	17%	52,991
Vaughan	74%	7%	10%	9%	69,436
Whitchurch-Stouffville	84%	1%	3%	12%	8,574
York Region	72%	6%	11%	12%	277,987

SOURCE: York Region Planning and Development Services, July 2006

Based on CMHC Housing Completion Data

**57% of the Region's future greenfield growth will be singles.
Can the Region really afford to service low density development?**

2031 Household Forecast					
	Single Detached	Semi-Detached	Row	Apt.	Total
Household Forecast to 2031 ¹	293,300	32,600	75,600	115,000	516,500

Source: York Region Planning and Development Services Department, April 2007.

1. York Region Household Forecast to 2031, derived from Places to Grow Population Forecast.

**Under current growth scenario,
119 km² of rural lands will be lost
to low density development**

Some Urban

(Residents per square kilometer)
Densities

GTAH (approx.) 3,000

GTAH excl former Toronto 2,819

Burlington (at 2021) 2,277

Mississauga (at 2031) 2,858

Amalgamated Toronto 4,239

Former City of Toronto 6,814

York Region (at 2031) 2814

(approx. 43.2 p+j/h; excluding greenbelt & ORM)

Cornell 5,764

North Oakville 2,669

Vaughan (2026) 1,673

**Business As Usual
Doesn't Work
Anymore**

**To be fiscally responsible,
York Region needs sustainable,
compact, mixed use
development!**

**How can York Region
accommodate 574,000 new residents,
and 345,000 new jobs by 2031
in a sustainable way?**

Need viable alternatives (cont'd)

- Plan to accommodate more than 1.5 million people by 2031.
- Reallocate 65% of new growth through intensification and 35% to new greenfield lands
- Increase density targets for whitebelt areas from between 37-60 p+j/he to 60-100 p+j/he.
- Prevent low-density construction along transit routes

Need viable alternatives (cont'd)

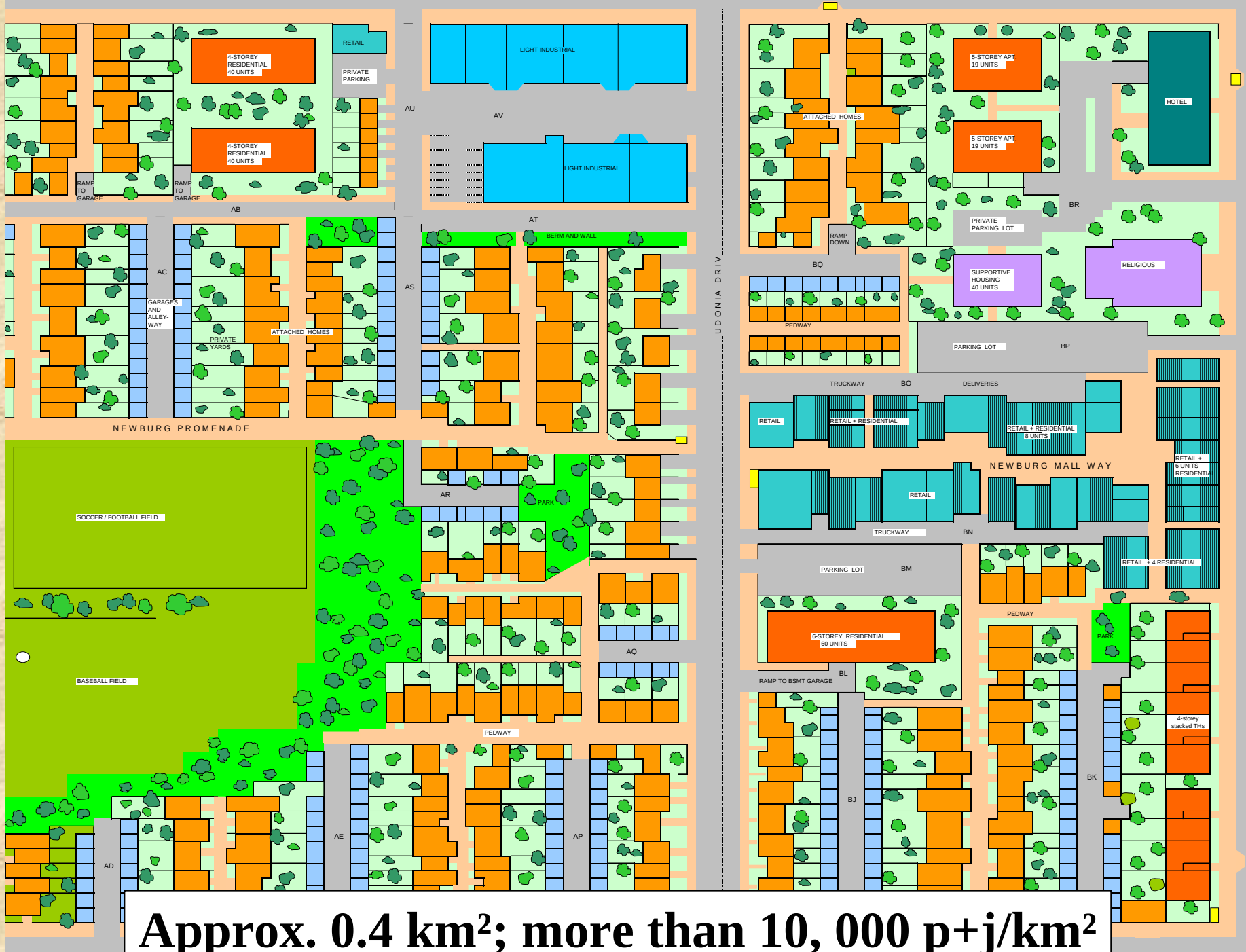
- **Eliminate single use, single storey commercial development**
- **Determine capacity for sustainable energy: methane capture, geo-solar, cogeneration; district heating/cooling, wind, local production/distribution**

Viabile alternatives (cont'd)

- Public education campaign to prepare residents for uncertainty and subsidize renewable energy
- shift taxes away from property towards energy consumption
- undertake significant measures to reduce transportation vehicle-km's

Here is one option...

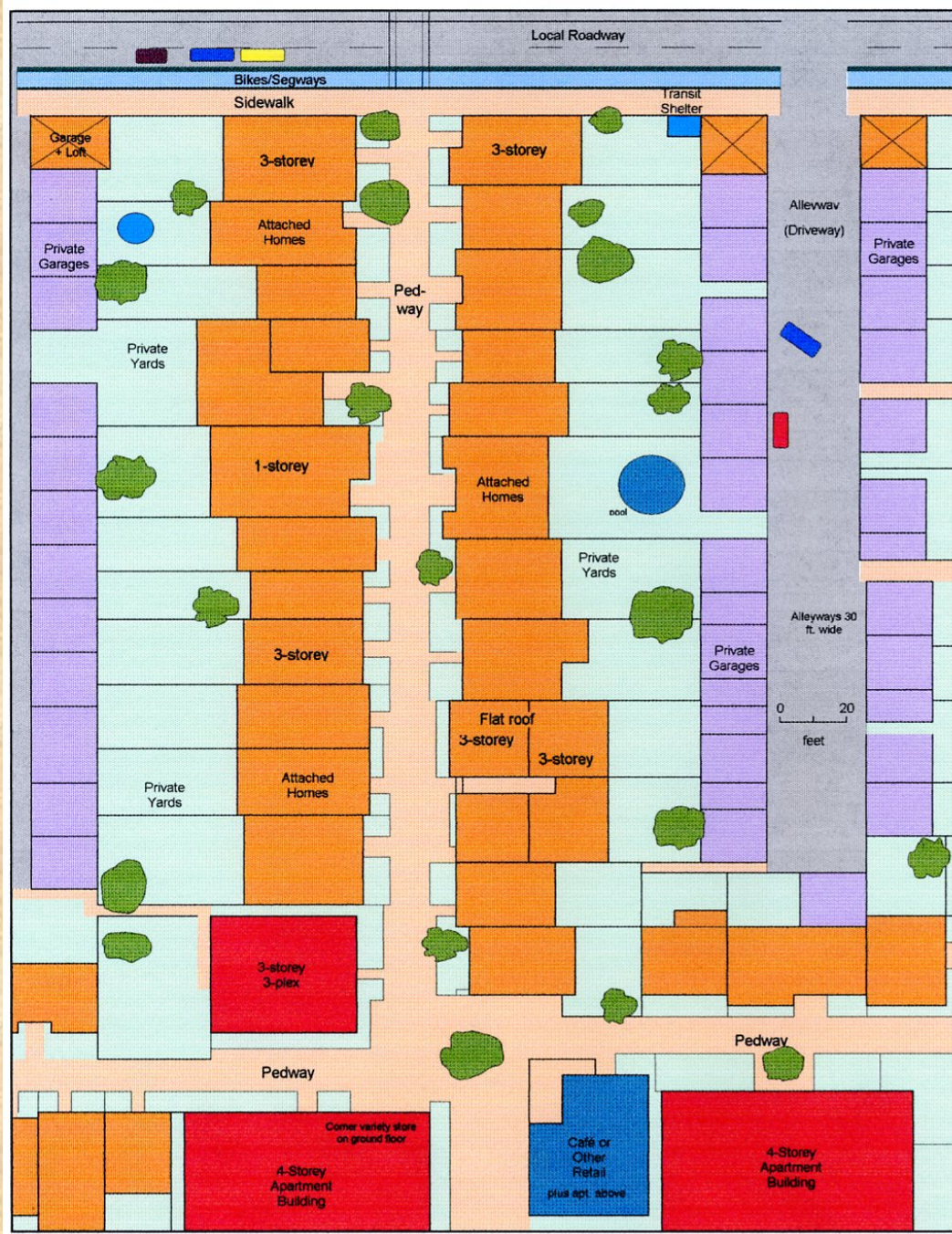
Newburg



Approx. 0.4 km²; more than 10, 000 p+j/km²

A Pedway in the Newburg concept

A mix of attached homes, apartments, and neighbourhood commercial



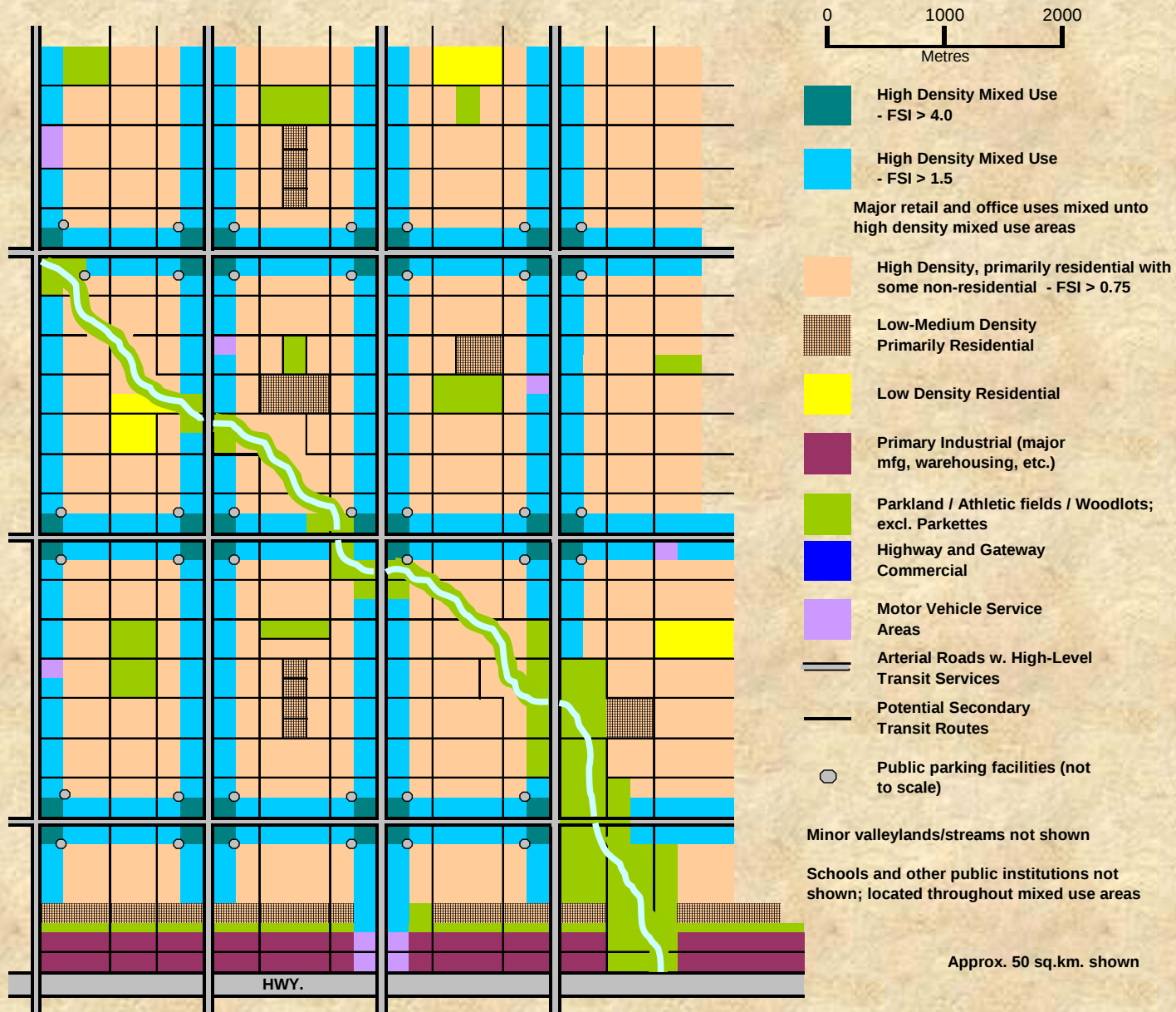
10,000 + people and
jobs/km²

HOW??

Very compact urban form

- **Almost no single-use, single-storey commercial development**
- **Few SFDs; almost all ground-oriented homes are attached (row house-style)**
- **Multi-unit residential units house 50% of population**
- **Highly mixed use**

Growing Towards Sustainability - High Density Greenfield Development (Building Cities Not Suburbs)



So instead of this...



Newburg Results in this







It can be done.

Thank you.

The Sustainable Urban Development Association (SUDA)

www.suda.ca

