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Journal



FOCUS ON ECOHEALTH

Healthy people and ecosystems • Reducing stress
Green city • Green places • Promoting ecohealth • Placemaking
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This year's symposium—Healthy Communities & Planning for the Public Realm—to be held October 5 and 6 at the Hamilton Convention Centre is anticipated to be a sold-out event. Early bird registration begins in March and will continue until July 31. The student call for presentations will remain open until September 1. To learn more about sponsorship and to get the latest updates, visit the OPPI Symposium page.



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Ecohealth

Collaborating for Healthy People and Healthy Ecosystems



By Mike Puddister & Pegeen Walsh

As the co-chairs of EcoHealth Ontario, we are pleased to introduce this issue of the *Ontario Planning Journal*. We have gathered a diverse group of talented professionals and thinkers to share their knowledge on the links between our environment and human health, and to highlight some of the implications for planning.

What, then, does land use planning have to do with human health? The short answer is, “pretty much everything!” The design of our built environment—buildings, transportation networks, greenspaces, public realms and natural systems¹—is powerfully connected to public health outcomes. For example, a community designed for “walkability” is conducive to regular physical activity, in turn combating diseases linked to inactivity, including cardiovascular illnesses and Type II diabetes. Similarly, communities designed to accommodate active and mass modes of transportation not only experience an increase in physical activity, but also a decrease in harmful air pollutants which are tied to respiratory illnesses, all of which have major public health implications. There are many other examples, but the ultimate takeaway is that the design of our communities profoundly affects the choices we make, the quality of our environment, and our own health and well-being.

EcoHealth Ontario is a collaborative which was born out of the recognition that greenspaces and green infrastructure could and should be leveraged toward a more proactive approach to human health. It brings together professionals from many

sectors including the fields of public health, medicine, academia, parks, planning, forestry, conservation and the environment.

EcoHealth Ontario develops collaborations among these sectors to build shared knowledge of the connections between the environment and human health. Partners contribute to the development of programs, policies, and a greater awareness to support enhanced ecosystem quality, increased greenspace, and improved access to nature.

As imperative as it is to protect and enhance natural spaces and ecosystems, it is equally necessary to reach out to communities and encourage them to value and use these spaces to their physical, psychological and social advantage. Research into the connections between greenspaces and health supports medical and public health professionals in effectively communicating with patients and the public, emphasizing that connecting with nature can assist in treating conditions such as stress and chronic disease. Research also helps inform policies around land use planning and greenspace design that encourage the development of healthy communities.

This issue of the *Journal* provides an opportunity to increase dialogue among sectors. The articles offered reflect the diversity of our partners and address an equally broad range of topics.

Contributors include Dr. Melissa Lem, a practicing family physician who offers her perspective on nature as a prescription



Mike Puddister



Pegeen Walsh

Above: Humber Bay Park (photo courtesy Suzanne Barrett)

for treating stress. Public health practitioners Marianne Kingsley and Ronald Macfarlane collaborate with researcher Tara Zupancic to share insights into Toronto Public Health's Report "Green City: Why Nature Matters to Health" and Toronto's efforts to implement its findings. Aryne Sheppard of the David Suzuki Foundation and Tara Zupancic provide evidence to support a call for our cities to become green places, rather than simply focussing on the greenspaces within them.

Planners Rob Voigt and Loretta Ryan show how a planning perspective on the public realm and placemaking can further objectives for healthier communities. Chris Gosselin explains how the Region of Waterloo's Greenlands Strategy is helping to enhance quality of life and urban liveability, improve urban air quality, create venues for social interaction and promote walking and physical activity. Jane Lewington and Mike Puddister discuss how conservation authorities are developing new collaborations with other sectors to apply a watershed approach to planning and maximize the benefits of conservation areas to our communities.

This issue also contains two articles on opportunities for training and education about ecohealth, both include OPPI as a key partner. Kevin Haley, with York Region Public Health and a member of the Ontario Public Health Association's Built Environment Work Group, introduces an online course for public health and planning professionals wishing to learn how to create healthier built environments. Arlene Etchen describes work by Canada Mortgage and Housing Corporation that focuses on opportunities to facilitate aging in place by planning for walkable, compact, mixed-use development communities that include everyday access to nature and walking trails.

We would like to acknowledge support from the Ontario Trillium Foundation, which enables us to organize workshops, carry out research, and undertake communications activities and policy development. This has helped to advance the protection, restoration and enhancement of ecosystems and in turn the health and well-being of our communities.

We are grateful to the OPPI for this opportunity to create a special issue of the *Journal* on ecohealth. We thank all our contributors for creating what we hope will be a valuable resource to readers and a catalyst for more collaboration in support of improved public health outcomes.

Mike Puddister is deputy CAO and director of Watershed Transformation at the Credit Valley Conservation Authority. His current responsibilities include terrestrial, aquatic, wetland habitat restoration, forest management, urban and rural community outreach, education and exploring and promoting the concept of ecohealth. Pegeen Walsh is executive director of the Ontario Public Health Association. She oversees the education, advocacy and capacity building activities of this member-based charity dedicated to providing leadership on issues affecting the public's health through prevention, health promotion and protection. For more information, visit ecohealth-ontario.ca or follow us on Twitter (@OnEcoHealth).

Endnote

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Suzanne Barrett

This issue of *OPJ* was curated by Suzanne Barrett, coordinator of EcoHealth Ontario. Suzanne is a freelance consultant who specializes in environmental planning, communications, facilitation and stakeholder engagement.

She recently prepared the report of the Advisory Panel on the Coordinated Review of the *Growth Plan for the Greater Golden Horseshoe, Greenbelt Plan, Oak Ridges Moraine Conservation Plan and Niagara Escarpment Plan: Planning for Health, Prosperity and Growth in the Greater Golden Horseshoe: 2015-2041.*



IMAGE COURTESY OF CONSERVATION ONTARIO



Climbing the stairs at Thornton Bales Conservation Area



Reducing Stress in the City with Nature

By Melissa Lem

As far as our brains are concerned, modern cityscapes are hotbeds for stress. From seas of flashing taillights to crowded concrete mazes, scientists believe that urban environments overstimulate attention centres in the cerebral cortex, leading to fatigue, poor concentration and irritability.¹ Thankfully, a growing body of research indicates that exposure to nature can be a direct antidote to this. One theory suggests that being innately drawn to biodiverse settings was ideal for the survival of early humans, while another posits that surrounding yourself in greenspace rests your conscious mind and restores its ability to focus.² Let's take a look at how urbanites can incorporate more green time into their daily routines, and the evidence behind this effective mental health intervention.

A workday typically begins with your journey to the workplace. The 2011 Canadian National Household Survey calculated that 74 per cent of commuters drove a motor vehicle to work,³ while only 6 per cent walked and 1 per cent cycled—unfortunate statistics given the stress-inducing effects of car-oriented cities like noise pollution and less social interaction. On the other hand, a 2005 study of 34 American cities⁴ linked community parkland to higher rates of active commuting, while other research demonstrates that people with bike trails close to home spend more time pedalling to the office. Given that exercise in nature induces even greater improvements in



Melissa Lem

anxiety and depression than indoor exercise, establishing greenspace networks for the job commute can play a valuable role in health promotion.

The importance of connecting with nature continues once you punch the clock. Although prolonged sitting and screen time—which together have been shown to worsen blood pressure, psychological distress and insomnia—may be difficult to avoid, greening your work environment both inside and out can mitigate these occupational maladies. In fact, a 1998 study of 100 Mediterranean workers⁵ found that those who could see trees and vegetation from their windows were happier and less affected by job stress. Bringing nature indoors through imagery and greenery is another simple way to boost your mood. Participants in a 2009 American study⁶ reported feeling significantly more mentally refreshed after viewing dramatic nature photographs as opposed to scenes of the built environment. Meanwhile, proven benefits of office plants include biofiltration of indoor pollutants that cause fatigue and headache, as well as promoting a greater sense of well-being and comfort.

Midway through that long day, taking your lunch or coffee break outdoors is an ideal opportunity to increase your daily dose of green time. Even if you only have a few minutes to spend on your sandwich, research indicates that brief micro-experiences in nature can have objectively positive effects on stress levels and cognition. A fascinating 2011 study from Japan⁷ noted that young men who sat in a forest for just 15 minutes had considerably lower heart rates and cortisol (stress hormone) levels, as well as self-reports of stress, than when they sat in an urban site. As far as brain function goes, a



IMAGE COURTESY OF CONSERVATION ONTARIO

Yoga in Beamer Memorial Conservation Area

20-minute walk in a park enhanced the concentration scores of Chicago children with Attention Deficit Hyperactivity Disorder similar to the magnitude of prescription stimulant medication.⁸ Ensuring that pockets of greenspace are scattered throughout our cities—and regularly accessed by workers—could very well result in a more content and efficient workforce.

Seeking out natural settings for recreation with family and friends after work or on the weekend is another way to promote mental resilience. Travelling further afield to a provincial park for a day hike may be even more potent than a stroll along a municipal trail, as brain benefits appear to rise with rising plant diversity.⁹ Furthermore, recent studies of adults who participated in three-day “forest bathing” compared to urban trips in Japan logged jumps in their disease-fighting immunoproteins and cells,¹⁰ corresponding with lower stress levels. Not only that, but children with more nature in their lives realize a wealth of favourable psychological outcomes, from higher self-esteem and self-discipline to a lower prevalence of depression and anxiety disorders.¹¹ What better way could there be to boost your mood than growing happier and smarter with your loved ones?

In summary, establishing green commute routes, increasing natural elements inside and outside workplaces and making immersive nature experiences accessible during non-work hours are key ways for urban planners to help buffer stress and improve mental well-being in local populations. As a medical professional, I hope to see greenspace and health flourish side by side within our cities over the coming years.

Dr. Melissa Lem is a Vancouver-based family physician who writes and presents regularly on the nature-health connection. She was the resident medical expert on CBC TV's lifestyle show Steven and Chris from 2011-2015 and is a member of the Canadian Association of Physicians for the Environment.

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IMAGE COURTESY OF SUZANNE BARRETT

Waterfront Trail in Etobicoke

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Ecohealth

Green City: Why Nature Matters to Health

Marianne Kingsley, Tara Zupancic & Ronald Macfarlane

Many people would agree that health or well-being should not be determined by the postal code of one's residence. But to a certain extent it does, since the nature of the environment people live in impacts health. Research has shown that having access to and using greenspaces promotes physical activity and improves health and well-being. The presence of greenspace is associated with positive health outcomes. It also provides places for stress reduction, mental restoration and social interactions.

Two meta-narrative systematic reviews were recently conducted by Toronto Public Health and the David Suzuki Foundation in collaboration with EcoHealth Ontario. The first [report](#) looks at the impact urban greenspace has on heat island mitigation and reducing air pollution.¹ The researchers found that all scales of greenspace, from green walls to urban forests are associated with relief from heat stress, reduced urban heat islands and air pollution. The second [report](#) focuses on the impact greenspace has on physical health, mental health and well-being, along with greenspace features which can benefit health.²

The findings of the reviews are intended to provide planners

and policy makers with additional information to support the provision and design of greenspaces in the city. The following highlights what the two reviews found.

Greenspace offers health benefits

There is a wide range of benefits that greenspace provides such as reduced mortality, obesity, cardiovascular disease and mental illness, including depression and anxiety, and improved birth outcomes.

Greenspace also improves air quality. This is significant because air quality continues to result in negative health impacts. For example, Toronto Public Health estimates that current levels of air pollution in the city leads to 1,300 premature deaths and 3,550 hospitalizations each year.³ Additionally, studies indicate that all types of greenspace, from single trees, green roofs to large parks contribute to improved air quality.

Greenspaces can also help cool cities. Cities such as Toronto have large thermal storage capacity, localized heat sources,

Above: Shaded street (photo courtesy of Toronto Public Health)

such as vehicles, and often poor air circulation. This results in higher day- and night-time temperatures, which can lead to heat stress during periods of hot weather. Available data show that greenspace can provide heat reductions of between 1°C and 7°C compared to adjacent non-green areas. The range of cooling provided by greenspaces depends on several factors such as size, type of vegetation, proximity to other greenspaces and presence of trees (including street trees planted along the sidewalk). For example, closely spaced, connected smaller greenspaces provide greater cooling to adjacent urban areas than large, disconnected individual parks with open grass areas. Evidence shows that dense urban areas with high vegetation cover can be cooler than lower density but less well vegetated areas.

Health benefits = economic benefits

Trees in Toronto remove an estimated 1,900 tonnes of air pollutants per year leading to over \$80-million worth of environmental benefits and cost savings each year.⁴ This translates into a benefit or cost savings of \$1.35 to \$3.20 for every dollar spent on tree maintenance.

A study of green space in Toronto found that street trees in particular are associated with improved perception of good health and lower presence of cardio-metabolic conditions such as hypertension, high blood glucose, obesity, high cholesterol, myocardial infarction, heart disease, stroke and diabetes.⁵ The impact of planting 10 or more street trees on a city block would improve health perception and decrease cardio-metabolic conditions to the same extent as increasing the income of each household on that block by about \$10,000 per year. This increased sense of well-being would also be equivalent to feeling seven years younger on average.



Marianne Kingsley



Tara Zupancic



Ronald Macfarlane

Parks and playgrounds are good for kids' health

It seems rather obvious to state that children are more likely to play and be physically active in spaces designed for them to be active in. This translates into creating inviting playgrounds that include a diversity of elements, such as shade structures, banners, gardens and artwork.⁶ Children who have nearby access to parks and playgrounds are more likely to be a healthy weight than those who don't have access.⁷

Greenspace close to home is best

Greenspace close to home has been found to be significant for several health outcomes. Closer living proximity to greenspace is associated with reduced morbidity,⁸ reduced stress and a lower likelihood of obesity.⁹ Similarly, living more than one kilometre away from the nearest greenspace is associated with poorer health and decreased quality of life.¹⁰

A U.S. study highlights the impact living close to green space has on health. Authors Kuo and Sullivan compared levels of aggression for 145 urban public housing residents randomly assigned to buildings with varying levels of nearby nature (trees and grass). Residents living in the greener areas reported less aggression, violence and mental fatigue than did residents living in the relatively barren buildings.¹¹

This highlights the importance of even a small greenspace to promote health in urban areas.

Nearby greenspace adds benefits

While all segments of the population benefit from exposure to greenspace, children and low-income groups appear to benefit



Toronto treescape

IMAGE COURTESY OF TORONTO PUBLIC HEALTH

the most. Increasing access to nearby greenspace, particularly in low-income neighbourhoods, may offer considerable opportunities for reducing health inequalities.

One large study conducted in England classified the population of England at or below retirement age into area-based income deprivation and greenspace exposure groups. Researchers found that low-income people who lived in the greenest areas had significantly lower all-cause mortality and mortality from circulatory diseases.¹²

Perceived maintenance necessary to benefits

Several studies have found perceived safety and upkeep of greenspace may have the greatest influence over whether or not it is used and therefore provides health benefits. In fact, a perceived lack of care is associated with poorer self-reported health, neighbourhood dissatisfaction, stress, exclusion and poorer mental health.²

What Toronto is doing

There are many opportunities to improve health through better provision of greenspace. Toronto has long recognized the importance of the urban forest and the benefits it provides and over the past decade has adopted policies, by-laws and guidelines to better support the protection and enhancement of greenspaces in the city. However, land uses for parks can create tensions between competing needs, such as requests for a community garden that may limit more inclusive uses. Innovative solutions to meet the public needs are required, for example finding alternate spaces like rooftops to accommodate more exclusive use activities.

As part of its Strong Neighbourhood Strategy the city will invest \$12-million in its 31 neighbourhood improvement areas to create new facilities such as playgrounds, parks, basketball courts and other infrastructure improvements. This provides an opportunity to increase tree cover and improve greenspace in these areas, which will contribute to well-being and help reduce health disparities. This supports Toronto's ongoing Park Plan initiatives to identify and enhance the city's capacity to expand the park system.

Improved access to greenspaces provides an opportunity to improve health for everyone. We also need to work towards providing every child in Ontario with a safe, greenspace with shade to play in to promote healthy weights and help form healthy lifelong habits.

Marianne Kingsley is a health policy specialist with Toronto Public Health, Tara Zupancic is the founder and director of Habitus Research, and Ronald Macfarlane is manager of healthy public policy with Toronto Public Health.

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Creating Green Places

By Aryne Sheppard & Tara Zupancic

Home is more than just a dwelling. Ideally, home is a place of beauty where we find refuge, connection and well-being. Historically, our sense of home was tied to a particular landscape—it oriented us in space and formed an important part of our identity. As our world becomes increasingly urbanized, our sense of place and our understanding of home have changed. For many of us, our connection to the land has been severed and we no longer consider nature our home. This nature deficit comes at a price.

Being connected to nature and having access to an abundance of greenspace is vital to ensuring our long-term health and well-being. Urban greenspaces are psychologically restorative and have a natural ability to filter pollution from the air and reduce local air and ground temperature. This is particularly important considering that every year, thousands of Canadians die prematurely from acute air pollution and many more suffer from increased illness and hospitalization due to high summer temperatures.

Our communities have grown rapidly, and the fields, streams and woodlands—the natural playgrounds of our youth—have largely disappeared, leaving many Canadians without access to nature nearby. A growing body of research shows that lower income residents are less likely to have access to greenspace, further eroding their health and well-being, and deepening health inequity in our cities. Given the challenges of socioeconomic inequality, urban densification and an aging population, it's essential we find ways to build cities that maximize well-being and minimize health risks for all residents.

In collaboration with EcoHealth Ontario, the David Suzuki Foundation recently undertook a systematic review of the evidence to better understand how greenspaces help reduce heat, improve air quality and support healthy, livable urban communities. In March 2015, the foundation released *The Impact of Green Space on Heat and Air Pollution in Urban Communities*.¹ The report confirmed that urban greenspaces—from trees and parkettes to green roofs and large natural spaces—provide significant health benefits for residents and the community.

More nature in our cities is clearly better but the quality and

density of urban greenspace are also important considerations. The density and spatial configuration of an urban forest affects land surface temperatures in the city and these elements are critical for improving local and city-wide urban air quality. Closely connected, smaller greenspaces with densely-planted trees and shrubs can actually provide greater cooling effects to adjacent urban areas than large individual parks with open grass. Islands of green, even large city parks, in some parts of the city can't make up for green deserts in others.

Walking city streets, it's common to associate tightly knit majestic trees with neighbourhood affluence. Our intuition is right, there are disproportionate heat- and

air-pollution-related health burdens associated with unequal distribution of urban greenspace. Lower-income and minority populations often bear the bulk of a city's green deficit, with less access to trees and high-quality natural spaces and therefore unequal access to the health benefits that nature provides.

These studies show that the accessibility and connectivity of greenspace matter to our health. Urban residents need more than isolated greenspaces, they need to live in green places. The David Suzuki Foundation report highlights a number of policy-relevant recommendations for creating green urban places:

Use a multi-scale approach—Wherever possible, policy decisions regarding structure of the urban forest should consider spatial differences and community impacts. Greening strategies to mitigate urban heat and air pollution should apply a multi-scale approach across local communities, cities, regions and provinces to avoid disparities in distribution that can lead to green deserts and pollution hot spots.

Diversify greening strategies—Evidence suggests that optimal urban greening densities are 50 per cent coverage or more. Given the real spatial constraints our cities are facing, we need to be

creative. Strategies to achieve green density goals can include the establishment of urban greenbelts, greenways and other protected greenspace in cities and suburbs like Ontario's Greenbelt. Strategies may also include minimizing distances between small urban parks to increase the flow of cool air and air pollution dispersion and minimizing green densities for new site developments. Alternatives like green walls can be considered where ground space is limited.



Aryne Sheppard



Tara Zupancic



IMAGE COURTESY OF JODE ROBERTS

Toronto's greenspaces include rooftops and urban forests

Prioritize vulnerable areas—Urban greening strategies should prioritize low-income neighbourhoods and the community should be involved in decision-making. Vegetation screens and other kinds of green barriers to traffic pollution should be built around playgrounds, schools, hospitals and residential areas. Although street trees are beneficial for reducing local temperatures and air pollution, some evidence indicates that in high-traffic areas with reduced wind, trees may actually impede the dispersion of automobile emissions and increase pollution levels within the street canyon. In these cases alternative forms of planting should be considered.

Greenspace can provide cooler and cleaner air to our cities, which is essential to our health. We need to improve the quantity, quality and connectivity of greenspaces; prioritize green strategies for vulnerable urban areas and begin integrating greening policies with broader health and land use planning policies. Although increasing urban greenspace is not sufficient to solve heat and air pollution challenges, greening efforts can be a significant and meaningful mitigation strategy. As city builders, we need to ensure our cities become green places.

Aryne Sheppard, MA, Med, is an adult educator and counsellor with a professional background in community development, leadership training and environmental education. She serves as the senior public engagement specialist at the David Suzuki Foundation where she campaigns on human health and nature connection. Tara Zupancic, MPH, is an environmental health and health equity research specialist dedicated to the well-being of people and the planet. For almost 15 years she has focused on environmental health research and policy that emphasize equity and the priorities of disadvantaged or vulnerable groups. Tara is the founder and director of Habitus Research.

Endnotes

- 1 Tara Zupancic (March 2015) The impact of green space on heat and air pollution in urban communities: a meta-narrative systematic review <http://davidsuzuki.org/publications/reports/2015/the-impact-of-green-space-on-heat-and-air-pollution-in-urban-communities/>
- 2 Neighborhood greenspace and health in a large urban center (July 2015) <http://www.nature.com/articles/srep11610>

Ecohealth

Promoting Ecohealth in Waterloo Region



By Chris Gosselin

The Region of Waterloo has long been a leader in promoting environmental conservation through official plan policies. The creation of the first municipally-designated environmentally sensitive areas in 1976 ensured that high quality remnant natural areas in our cities would be conserved for recreational uses as well as continue to provide an array of ecological services such as cleansing the air, filtering run-off, infiltrating precipitation and sustaining the flora and fauna that comprise our native biodiversity.

In 2005, as part of implementing its Growth Management Strategy, the region endorsed a Greenlands Strategy. The strategy recognised the public health benefits of greenlands, the contribution of greenlands to the vitality and liveability of our communities and the need to devote sufficient resources to maintaining green infrastructure.

The Greenlands Strategy led to the designation of the region's first Environmentally Sensitive Landscapes. Ranging in size from 1,414 to 8,589 hectares, these four predominantly rural landscapes comprise clusters of wetlands, woodlands, tall grass prairies and watercourses, as well as thriving farms, hamlets and aggregate operations. Official plan policies protect them from future urban expansion and inappropriate land uses.

Good planning policy can effectively restrict certain types of

development, but it does not necessarily promote good environmental stewardship. As planners, we are being challenged to transmute words on paper not only into on-the-ground reality, but into community values. To make this happen the region works with a network of individuals and community groups through a number of initiatives.

The Rural Water Quality Program delivered in partnership with the Grand River Conservation Authority provides grants to landowners to fence livestock out of tributaries of the Grand River. The purpose of the program is to improve surface water quality and the effectiveness of wastewater treatment plants downstream.

The Community Environmental Fund provides grants to support a range of stewardship projects. From 2010 to 2015, about 140 projects received over a million dollars in grants

toward stewardship and sustainability projects valued at over three times that amount through cash and in-kind contributions. Quite apart from all the trees planted, natural habitats restored, public events sponsored, and sustainability initiatives supported, these projects have involved countless regional citizens of all ages and walks of life in caring for some aspect of our environment. Participants have been physically active in carrying out the projects; they have planted trees in schoolyards to shade play

“Urban Greenlands, while typically much smaller in area and lower in natural heritage values than most natural areas, play a substantial role in terms of enhancing quality of life and the liveability of larger urban centres, improving urban air quality, creating venues for social interaction, and promoting walking and physical activity.”

~ excerpt from Waterloo Region Greenlands Strategy

areas and help prevent skin cancer, they have suppressed invasive species and they have raised healthy food.

A public liaison committee in the Laurel Creek Headwaters environmentally sensitive landscape initiated a detailed study of a scenic and environmentally sensitive roadway. It is also overseeing a project to control the spread of invasive Phragmites.

At present, the region is working with community partners and private landowners to develop a multi-property conservation land trust to bring significant rural natural areas under informed stewardship without relying on local governments except to process necessary planning applications. This will be complemented by the greenplan component of the Community Building Strategy, which will bring natural and human-scale elements into urban core areas as they undergo re-urbanization and intensification.

All these initiatives contribute to the physical health of the natural environment and our quality of life. Equally important, however, they bring people together in shared endeavours to build a healthier community. They involve children and adults in hands-on educational—and generally fun—activities. As residents with different backgrounds, talents and aptitudes work together on stewardship initiatives, we build community capacity to thrive in a changing environment and foster a stewardship ethic.

Chris Gosselin, RPP, is manager of environmental planning and stewardship in the Planning, Development, and Legislative Services Department of the Regional Municipality of Waterloo.



IMAGE COURTESY OF EMMA QUINN

Rockway Mennonite Collegiate students learn to build a boardwalk at the rare Charitable Research Reserve as part of a Community Environmental Fund project

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Placemaking for a Healthy Public Realm

By Rob Voigt & Loretta Ryan

Recent planning, economic development and real estate data show that people of all ages increasingly want to live in places that promote healthy lifestyles—walkable, mixed-use communities with a strong sense of place and high quality public spaces. Throughout North America, even during economic downturns, compact pedestrian-oriented neighbourhoods with easy access to nature, parks, community centres, libraries, schools and shops, have been seen to hold their value best. Underpinning healthy, well-designed communities is a high quality public realm.

To achieve these results, today's planner needs to be skilled in placemaking: "the process through which we collectively shape our public realm to maximize shared value."¹ However, the demographic, cultural, environmental and economic conditions under which planners currently work require more advanced and dynamic approaches than in recent decades. We can no longer use the tools and methods of the past and expect the results needed for the future.

In its broadest definition, the public realm is made up of all the publicly-accessible spaces within a community—parks, open spaces, walkways, roads, plazas, sidewalks, civic spaces and public buildings. In some communities it also includes privately-owned spaces that are publicly accessible. In short, the public realm is the stage upon which public life is performed. It is all the spaces between and sometimes within buildings where people can interact and social life happens. These are

the shared assets that knit together and animate all of the other parts of the places we live, work and play. The public realm defines a community.

Many communities find themselves with exasperating challenges, reduced quality of life and significantly less economic activity than before. But research² tells us that talent, entrepreneurs and knowledge industries around the world—precursors to economic growth—are attracted to communities where attention has been paid to the quality of the public realm. Other studies³ illustrate how a city's success is driven by the quality of life enjoyed by the people who live and work there. If people love where they live, the place will be

economically vital. Other research stresses that good design is more complex than simply aesthetic improvement of the built environment.

It is also about improved quality of life, equality of opportunity and economic growth. Successful towns and cities are heeding this new paradigm.

People enjoy spending time in places that are appealing on a variety of levels. Ideally, in a well-designed place, there is something to experience with all one's senses. This, along with the ability to interact with others in a safe, secure and energized environment, creates the most successful places. Developments with a high quality public realm and a diversity of activities throughout the day,

establish an overall sense of place for a community that gives a focus to people's daily lives, promotes physical and mental health, and



Robert Voigt



Loretta Ryan

"The lack of resources is no longer an excuse not to act. The idea that action should only be taken after all the answers and the resources have been found is a sure recipe for paralysis. The planning of a city is a process that allows for corrections; it is supremely arrogant to believe that planning can be done only after every possible variable has been controlled."

~ Jaime Lerner – architect and former mayor of Curitiba, Brazil



Children's festival in Creemore. Using streets as part of an active public realm and place of gathering

IMAGE COURTESY OF ROBERT VOIGT

enhances economic opportunities.

Placemaking is the human-centred design of the public realm that directly involves the people that will use the spaces created. In recent years, the term has become common parlance among developers, realtors, architects and planners, as well as local, regional and national policy makers, as its value to community health has become increasingly understood. It has gained popularity because of its practicality and far-reaching influence on the liveability and resilience of communities.⁵

While planners continue to seek more information and expand shared knowledge bases, this must not take precedence over concrete action to build healthy communities for future generations. Rather, planners need to become adept at working with incremental changes in the public realm, at finding ways of improving communities with many small steps in succession over a long period of time.

To advance our understanding of the public realm and placemaking, this is the focus of OPPI's 2016 symposium October 5th & 6th at the Hamilton Convention Centre. Fred Kent, founder and president of Project for Public Spaces, is one of many speakers who will engage members in various learning opportunities and thoughtful discussions.

In conjunction with the symposium, OPPI will be releasing a Call to Action: Healthy Communities and Planning for the Public Realm. Its purpose is to raise awareness and highlight key issues so that Ontario's planners and communities can identify and address the challenges associated with planning for the public realm.

Rob Voigt, MCIP, RPP is chair of OPPI's Planning Issues Strategy Group and Loretta Ryan, MCIP, RPP is OPPI's Director of Public Affairs.

Endnotes

- 1 Project for Public Spaces
- 2 Including research by Urban Land Institute
- 3 Knight Foundation's [Soul of the Community](#) study
- 4 United Kingdom's Commission for Architecture and the Built Environment
- 5 Examples of on-the-ground placemaking projects include recent initiatives in New York, San Francisco, Los Angeles, Vancouver, North Vancouver, Nelson, Bellingham, Houston, Creemore, Kitchener-Waterloo, Toronto, Kingston, Barrie, Collingwood, Wasaga Beach, Orillia and Seattle



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Stepping into Nature with Ontario's Conservation Authorities

By Jane Lewington & Mike Puddister

Ontario's 36 Conservation Authorities are unique community-based watershed management agencies dedicated to conserving, restoring and managing Ontario's natural resources on a watershed basis. Over 12 million people, or 90 per cent of the residents of Ontario, live within a watershed managed by a conservation authority. Operating under the *Conservation Authorities Act*, conservation authorities have played a significant role in Ontario's natural resource management landscape for nearly 70 years addressing local land and water management issues.

There is a growing body of literature substantiating the diverse benefits of greenspaces for public health and well-being. For example, research tells us that camping in a park, strolling or cycling along a waterfront trail, snowshoeing through a forest, having a picnic next to a waterfall, or watching birds and other wildlife in natural spaces helps to lower our blood pressure, recharge our emotional batteries, encourage physical activity and enable us to be in a more mindful space. We push away the pressures of work and life—even for a short time—and focus on the scenery, scents and experiences of nature. We connect with others through community gardens, parks and playgrounds that provide opportunities to socialize and create relationships.

Conservation authority programs and conservation areas

provide tangible and measurable social, economic and environmental benefits, contributing significantly to healthy people and communities. They are uniquely positioned to provide a wide variety of outdoor activities and programs that attract visitors of all ages. Nature programs, hiking trails, health and wellness programs, geocaching, cycling, tree planting and fishing derbies are examples of some of the activities offered across Ontario. Conservation authorities have about 2,500 km of trails that hug the Great Lakes shoreline, meander up the Bruce Peninsula, and explore moraines, glacial features, and a variety of forests and grasslands.

Many conservation authorities offer living classrooms which strive to attract people to the outdoors to learn about the many benefits of wetlands, rivers, wildlife, forests and birds. There are 32 permanent interpretive centres, 14 seasonal centres and many interpretive trails and cultural heritage attractions such as First Nation villages. Over 400,000 Ontario students from more than half of the province's school boards participate annually in conservation authority environmental education programs.

As Ontario's second largest landholders after the provincial government, conservation authorities play an important role in protecting and maintaining a wide swath of rural and urban greenspaces that ring and connect Ontario's communities. They



Jane Lewington



Mike Puddister



IMAGE COURTESY OF CONSERVATION ONTARIO

Follow Me at Cataraqui Conservation Area

own approximately 144,000 hectares of land and while many of these greenspaces—or conservation areas—are located in rural areas, a number of them are also nestled within or nearby urban boundaries.

Conservation authorities have long recognized both the ecological and public health values of greenspaces. They provide multiple benefits that appeal to residents and are important assets for Ontario communities. These greenspaces come in all sizes and are made up of forests that help to clean the air; wetlands that help to clean the water we drink; special tracts that preserve areas of scientific significance and natural heritage; and over 85,000 hectares of recreational land that help to recharge the bodies and minds of over six million visitors each year.

These lands also help us adapt to climate change impacts by reducing the effects of flooding, extreme heat and pollution. With their hiking trails, meadows, forests, play areas, gardens and water features, they are highly valued spaces that provide both economic and social benefits, including significant contributions to our physical and mental well-being.

Recognizing the impacts that greenspaces can have both ecologically and in terms of well-being, conservation authorities are key partners within EcoHealth Ontario, which includes a major focus on developing and spreading a shared vision of healthy watersheds supporting healthy people.

Two conservation authority initiatives have a particular focus on encouraging people to take advantage of the health benefits of contact with nature: Healthy Hikes and Mood Walks.

Healthy Hikes—Conservation Ontario and Ontario's 36 conservation authorities host an annual year round hiking campaign designed to encourage Ontarians to get active and go hiking in conservation areas. Participants receive information about the ways our environment boosts their health and how they can energize both body and mind by stepping into nature.

Mood Walks—Along with Hike Ontario, conservation authorities have been working with the Canadian Mental Health Association's unique and popular Mood Walks program supported with funding from the Ministry of Tourism, Culture and Sport through the Ontario Sport and Recreation Communities Fund.

Now in its second year, the Mood Walks program promotes improved physical and mental health by reducing barriers and creating new opportunities for people to be physically active in the natural environment. Hiking groups are formed and gather in conservation areas or other natural areas for regular hikes. Overwhelmingly, participants have found that being in nature reduces stress and anxiety, provides time to socialize with friends and enables physical exercise.

In 2014/15, the program targeted older adults (55 years of age

and over). Twenty-two new walking groups were established across Ontario with 64 per cent of these groups walking for at least 10 weeks. Most groups walked once a week and almost half of the walks took place in a conservation area. Participants in these walks reported that they felt a significant positive change in happiness, less anxiety and higher energy levels. Almost all of the participants (95%) said they achieved or somewhat achieved their personal goals.

During 2016, the Mood Walks project will build capacity for community-based social service agencies in Ontario to plan, implement and evaluate hiking groups for youth (ages 13-24) at-risk of or experiencing mental health disabilities. The program is designed to encourage and support youth to become physically active and to benefit from exposure to the healing effects of nature.

With the support of local municipalities and many other partners, conservation authorities have developed numerous watershed management programs to study, monitor, protect and enhance natural resources and their benefits. Recognizing that nature is vital to our own public health, the work of conservation authorities remains as relevant now as when it was initially formulated. Specifically, conservation authorities—

- Safeguard Ontario's rivers, lakes and streams
- Protect, manage and restore Ontario's woodlands, wetlands and natural habitats
- Protect life and property

from natural hazards such as flooding and erosion

- Provide opportunities for the public to enjoy, learn from and respect Ontario's natural environment.

Within the land use planning realm, conservation authorities provide a variety of services to their upper- and lower-tier watershed municipalities. Most provide plan input and review, permits under their regulations and technical clearances for matters related to natural heritage and natural hazards through review of a range of applications under the *Planning Act* and other legislation, such as the *Greenbelt Plan*. Conservation authority staff often provide technical expertise related to delineation and verification of natural features and functions as well as hazard lands. In this role conservation authorities support efforts of municipal planners in promoting sustainable community design and encouraging protection and restoration of green spaces.

Jane Lewington is Communications & Marketing Specialist with Conservation Ontario, the organization that represents Ontario's 36 Conservation Authorities. Mike Puddister is deputy CAO and director of Watershed Transformation at the Credit Valley Conservation Authority.

"The Step Into Nature Healthy Hikes Challenge provided me with the guidance, resources and motivation to take up hiking as a new pursuit. It quickly became a new passion of mine.

I incorporated our weekly hikes into my route and it was life-changing. I noticed that my physical health improved, my moods became more positive, and my outlook on nature was transformed.

I learned to appreciate the importance of being grounded and the peacefulness and tranquility that this could bring."

~ winner of the 2014 Step Into Nature Healthy Hikes Challenge



Improving Health by Design

By Marina Whelan

A report that shines a spotlight on the connections between land use and transportation planning, health outcomes and economic impacts was released by the GTHA Medical Officers of Health in 2014 to support planning for healthier communities. The research report, [Improving Health by Design in the Greater Toronto and Hamilton Area](#), provides specific recommendations to support decision-makers in creating health-supportive transportation systems and land use planning policies.



Marina Whelan

The report supports the Medical Officers of Health's call to action to shift how communities are planned, so as to increase the frequency that people move by walking, cycling and transit. It identifies that physical activity that needs to be built back into people's everyday lives, so that the healthy choice becomes the easy choice.

In addition, the report identifies three clear opportunities to improve health:

- Fund the Big Move, a regional transportation plan to improve transit in the GTHA²
- Strengthen provincial policies to support active transportation and public transit use
- Normalize planning policies to encourage active transportation and public transit use¹

The report summarizes research related to public health, transportation and community planning; it is also a comprehensive resource that provides a public health perspective on transportation and land use planning policy and decision-making. This article highlights the report's key findings.

Why are MOHs concerned?

The Ontario Ministry of Finance projections estimate that the Greater Toronto and Hamilton area is in the process of absorbing a population increase of over 3 million people - a 55 per cent increase from 2001 levels. Most of that increase is still to occur, with an additional 2.2 million living in the GTHA by 2031.¹ This increase will result in significant impacts on traffic congestion, economic prosperity, greenhouse gas emissions, air pollution and the health and well-being of residents.

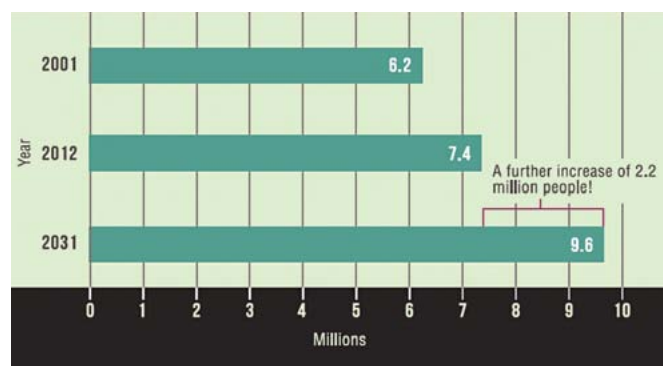
Land use, transportation and infrastructure planners are pivotal in the planning and development of communities. Public health professionals have become increasingly interested in community planning, and are now mandated to work with municipal and other partners to provide public health expertise to create built environments that support better health.

The disease epidemics of today are related to chronic diseases rather than infectious ones; yet they are still related to

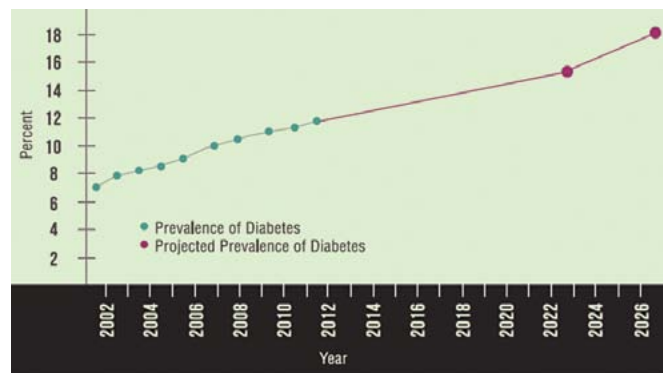
how and where people live. Location impacts health by influencing activity levels, exposures to air pollutants, risk of injury, access to healthy food and social interactions.¹ Society can have great impact on the rates of chronic disease by creating healthy, compact, complete communities that safely support increased walking, cycling and public transit use.

Health trends and opportunities

Obesity rates have doubled in Canada in just a few decades.³ Connected to obesity rates are factors such as unhealthy eating, physical inactivity and sedentary behavior. These factors lead to many health problems including diabetes and other chronic conditions. The current rate of diabetes within GTHA adults is 11.7 per cent, and it is expected to increase to 16.4 per cent by 2027. The actual number of cases is truly alarming, with an increase of 650,000 cases in 2011, at a cost of \$2.6-billion¹. By 2027, these cases are expected to reach almost 1.2 million in 2027⁴ at an anticipated cost of \$2.6-billion (in today's dollar).¹ There are also thousands of new cases of heart disease, stroke, breast cancer and colon cancer each year.¹ Chronic diseases have a negative impact on the well-being of individuals, cause an economic strain on society and result in reduced productivity and increased disability.¹



Population in the GTHA, 2001 to 2031¹



Actual and projected prevalence of diabetes, GTHA, 2002 to 2027¹

However, the incidence of chronic diseases can be decreased by building communities which integrate active transportation networks and economic opportunities into residential neighborhoods and thus increase physical activity. *The Canadian Physical Activity Guideline* recommends 150 minutes per week of moderate to vigorous activity and is associated with a 10-22.5 per cent lower risk of death from all causes.³ Indeed, there is evidence that there are health benefits from even small bouts of activity, such as walking to get to transit stations. U.S. studies have shown that states and cities with a higher proportion of people commuting to work by foot or bicycle have lower rates of diabetes.⁴

IMPACTS

The health and economic impact related to diabetes of implementing the *Big Move* is estimated at:

- prevention of 184 premature deaths each year in the GTHA
- prevention of 1,000 cases of diabetes
- economic benefit of \$1.2-billion

The health and economic impact related to air pollution of implementing the *Big Move* is estimated at:

- prevention of over 150 premature deaths each year
- decrease of 78 to 107 hospitalizations each year
- economic benefit of \$2.2-billion

In 2014, Toronto Public Health released a report that outlined the burden of illness associated with air pollution.¹ It estimates there are over 700 premature deaths and between 2,800 and 4,000 heart- and lung- related hospitalizations each year as a result of traffic-related emissions. The economic impact associated with these health impacts is an estimated \$4.6-billion. Decreasing traffic emissions will have a positive impact on health, be economically beneficial and reduce the emission of greenhouse gases.¹

Other aspects of health related to transportation and the built environment that are addressed in the report include: health and social equity, aging populations, injury and safety, mental health and social well-being and access to healthy food.

Promoting health by design

There is increasing understanding of the connection between the built environment and human health. A conventional suburban design is associated with reduced physical activity, obesity and a range of chronic diseases.⁵ Alternatively, compact, walkable and transit-friendly communities are associated with more active transportation and increased physical activity.⁶

Land use and transportation planners expertise concerning community design and their knowledge of planning processes, allow them to be key influencers in implementing policies that support increased physical activity. Fortunately, the community design elements that promote health, such as mixed land use and proximity to services, also align with characteristics that promote community sustainability and economic benefits.

Conclusion

Improving public health requires a complex, multi-faceted approach. One critical aspect is the provision of an environment that supports healthy behaviours, such as more physical activity. However, as the population grows it is increasingly imperative to

transform both communities and transportation modes.¹ Thus, opportunities to support, fund and promote transit initiatives, such as the Big Move, should be pursued.

Provincial land use and transportation policies that support increased active transportation and use of public transit should be strengthened. This can be accomplished through support and implementation of the *Provincial Policy Statement*, land use appeals process and relevant municipal policies.

Finally, it is critical to normalize land use planning for active transportation and public transit use. Examples of how this can be accomplished are the provincial guidelines for minimum target densities and transit-supportive measures. These ideas are embedded in the Ontario Professional Planners Institute's call for action for healthy communities. The call states that municipal planning tools are the starting point for making active transportation the norm in Ontario communities.⁷

Improving Health by Design is a clarion call to build healthier communities. Implementing the identified opportunities requires robust partnerships with land use and transportation planners to create sustainable transportation systems and community designs that will support healthy, compact and complete communities.

Improving Health by Design in the Greater Toronto-Hamilton Area was prepared by Dr. Mowat (MOH Region of Peel Public Health), Dr. Gardner (MOH Simcoe Muskoka District Health Unit), Dr. McKeown (MOH Toronto Public Health), Dr. Tran (MOH Hamilton Public Health), project consultant Dr. Moloughney and project manager Gayle Bursej.

Marina Whelan is a manager with the Environmental Health Department at Simcoe Muskoka District Health Unit. She is actively involved with healthy community initiatives, sustainability and climate change and is a member of the EcoHealth Steering Committee.

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Public Health and Planning 101

By Kevin Haley

There is a growing body of evidence supporting the relationships among land use planning decisions, community design and health.¹⁻⁴ Researchers have noted that the built and natural environments influence a number of risk factors and illnesses of public health concern such as physical inactivity, obesity, cardiovascular disease, diabetes and respiratory disease.¹⁻⁴ This information is spawning considerable interest among public health professionals in working more closely with planners on shaping the built environment.⁵⁻⁸ However, there is a lack of knowledge and understanding between the professions regarding each other's overall mandate, legislation and decision-making processes.⁹⁻¹²



Kevin Haley

A collaborative project entitled [Public Health and Planning 101](#) was initiated by the Ontario Public Health Association, Ontario Professional Planners Institute and the Public Health Agency of Canada with the objective of developing an online education module for public health and planning professionals in Ontario. The purpose of the project is to increase cross-disciplinary knowledge among public health and planning professionals involved in the land use planning process to help inform policy related to healthy built environments.

The project workgroup represents a diverse range of public health and planning professionals with expertise in environmental health, chronic disease, injury prevention, epidemiology, nutrition and community planning who are working collaboratively with the goal of developing this education module.

Phase 1 was a needs assessment. It involved surveys of public health unit staff and OPPI members, an environmental scan/critical appraisal and external stakeholder consultation. The surveys were completed by 304 public health professionals and 301 planning professionals. They included questions about demographics, perspectives on the built environment and health, working together on the built environment, resource development and ideas to facilitate better collaboration.

The results show that both professions have limited to moderate knowledge about the other's roles and responsibilities, legislation, policies/standards and terminology/concepts related to the built environment (see figure 1). But they indicated strong support to work together on the built environment and highlighted the need for further education among public health and planning professionals in Ontario. The surveys also revealed that the education module should address barriers concerning the lack of understanding of each profession's mandate, as well as knowledge gaps related to the built environment.

Phase 2 focused on content development. Phase 3 involved pilot testing the module with public health and planning professionals and finalizing the content. Phase 4 will involve launching the online education module, expected in the winter of 2016.

The online module has both shared and tailored sections for public health and planning professionals. It comprises four modules: Introduction to Health and the Built Environment; Policy, Legislation and Standards; Roles and Responsibilities; Public Health and Planning Professionals Working Together.

The course format consists of short videos, exercises, interactive activities, supporting resources and self-examinations. For example, Module 1, Introduction to Health and the Built Environment, examines the growing body of evidence that links the built environment and health (see figure 2). It also includes the rationale for public health and planning professionals working together. Concepts such as greenspace and green infrastructure and linkages to the built environment are outlined, as well as land use planning principles and how they relate to health.

How communities are planned and built, and the services and resources provided within them, directly affect human health. Thus there is a need to ensure that planners and public health professionals can effectively work together to plan

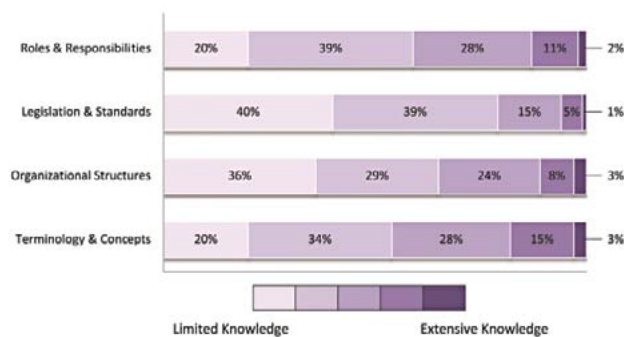


Figure 1a: Planners' knowledge about public health

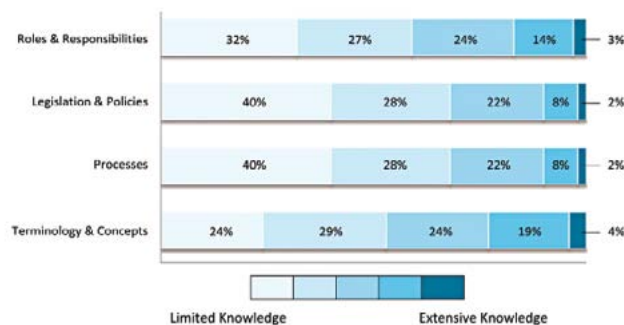


Figure 1b: Public health knowledge about land use planning

IMAGES COURTESY OF THE AUTHOR

Click on the icons below to learn more



Health risk factors related to the built environment

Figure 2: Example of interactive activity from module 1 (health concepts and risk factors impacted by the built environment)

healthy communities. This online course will help to bridge the gaps between the professions and leverage a shared body of knowledge.

Kevin would like to acknowledge the contributions to the project of members from the following organizations: Ontario Public Health Association, Ontario Professional Planners Institute, Public Health Agency of Canada, York Region Public Health, Sudbury and District Health Unit, Halton Region Public Health, Middlesex-London Health Unit, Hamilton Public Health, Grey-Bruce Health Unit, Peel Region Public Health, the Public Health and Planning 101 Project Team as well as our funders including the Public Health Agency of Canada, Public Health Ontario and York Region Public Health.

Kevin Haley is the environmental health specialist with York Region's Community and Health Services Department and the lead on Public Health and Planning 101 project. Kevin is a member of the EcoHealth Ontario Communications Workgroup as well as the Ontario Public Health Association's Health and the Built Environment Workgroup.

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Aging in Place

By Arlene Etchen

By 2028 over one-third of Canadians will be over the age of 55, according to Stats Canada, and the majority of them will want to stay in their communities, to age in place. For some seniors, this means staying in the same house they have occupied for years and for others it means staying in the same community but in a different housing unit.¹ For healthy communities this preference means providing a full continuum of housing choices that allow older adults to continue to live independently and participate in their community for as long as possible.

Meeting this demand will require adaptations to existing housing and increased reliance on both government and private service providers. It also requires environments that are physically supportive and responsive to seniors' needs. The built and natural environments play an important role in people's physical and psychological well-being, by providing public spaces, transit, pedestrian routes and access to nature, for example. A recent study shows that everyday access to nature is beneficial for seniors because it motivates them to be active physically, spiritually and socially, which can offset chronic illness, disability and isolation.²



Arlene Etchen

Planners have many opportunities to help accommodate the needs and aspirations of this growing demographic. Originated by the World Health Organization, the concept of age-friendly communities is being explored in a number of places across Canada. These communities are converting unused schools to accommodate community services for seniors, creating public greenspaces and modernizing existing housing. They are planning walkable, compact, mixed-use neighbourhoods which enable seniors to live independently by increasing their sense of safety in public spaces and reducing reliance on automobiles.³ They offer a range of housing options that makes it more likely that seniors will be able to find appropriate housing as their needs change.^{4,5} And they



IMAGE COURTESY OF THE AUTHOR

Seniors enjoying a walk in the park

maintain sidewalks, improve lighting and provide access to pedestrian trails to help seniors feel and keep safe and increase their quality of life by walking more often. These features not only meet the needs of an aging population, they also contribute to healthy, liveable communities for people of all ages.

Arlene Etchen is a Canada Mortgage and Housing Corporation knowledge transfer consultant in Ontario. Arlene has been working in the urban planning and energy sectors for more than 15 years. Her work includes collaboration with OPPI through conferences and workshops that explore concepts of healthy communities.

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LAKELAND DISTRICT

Walk Jane Walk...

By Scott Taylor and David J. Stinson

It has been more than 50 years since Jane Jacobs wrote her opus *The Death and Life of Great American Cities*, a seminal critique of the rationalist assumptions underlying urban renewal and sub-urban sprawl.



Scott Taylor

David Stinson

Her challenge to planners is that abstraction will not work "...You've got to get out and walk." (*Downtown is for People*, 1957)

In this spirit, the Lakeland District undertook a number of walks this season. Our first event was in April and involved close to a dozen children and eight adults. Cartoons were used to illustrate the principles Jane espoused, the Flintstones to show mixed-use, or the Princess and the Frog to show architectural density and ease of getting around. David Stinson led the kids through the neighbourhood and then they got to design their own neighbourhood. The concept they enjoyed the most was the popsicle test—walking to the store to get a popsicle and returning home before it melts—a practical example of the pivotal role local stores play in creating the "sidewalk ballet".

In June, planners and community members hosted Owen Sound's first two Jane's Walks. The first walk, entitled Meandering through Owen Sound's Downtown, was led by Maryann Thomas, a local business owner and publisher, who worked with Jane Jacobs on publishing her

final book. Maryann took 25 participants on a walk through downtown, facilitating a discussion on the resiliency and evolution of the city's commercial core. The second walk, entitled Jewish Roots, Jewish Routes, was led by Aly Boltman, who explored the local Jewish heritage with 40 participants.

Barrie hosted its second annual Jane's Walk in June with about 25 participants on a tour of the downtown led by Allan McNair and Town Crier Steve Travers. It offered a delightful blend of history, humour, gossip and planning principles. Thanks to Kristin Dibble Pechkovsky for coordinating and organizing the event.

Both *Scott Taylor* MCIP, RPP and *David J. Stinson* MCIP, RPP, P.Ag. serve on the Lakeland District programme committee. Scott is a senior planner with Grey County and Dave is a partner at Incite Planning.

OBITUARY

Andrea Gabor, FCIP, RPP, 1952–2015

Andrea Gabor, award-winning urban planner, partner of Urban Strategies and former president of the Canadian Institute of Planners passed away after a long illness on December 24, 2015. She loved cities and her work focused largely on new urban development and significant city-building redevelopment projects. She created numerous new official plans and growth management strategies across Ontario, involving extensive community and agency engagement. Her work was recognized for deeply respecting the public interest balanced with the need for realistic implementation, and her



projects won numerous awards from OPPI, CIP, Canadian Architect and the American Planning Association.

Andrea enthusiastically contributed to her profession. She was president of CIP from 2010 – 2013, after decades of committee and leadership positions with OPPI and the Toronto Region Board of Trade. She was a regular speaker on planning and related public issues. And she was assiduous in promoting professional development, always encouraging staff to greater aspirations: to play a role in professional and public life and to undertake work at the highest standard.

She loved cities and urban life, and will be remembered for building a legacy of vital contributions to cities and places around the world and to her profession.

OBITUARY

Philip Brown, MCIP, RPP, 1951–2015

Philip Brown passed away in November. His career took him and his family first to Stratford where he served as a city planner, then to Sudbury where he worked for Northern Non-Profit Housing, and finally to Ottawa in 1986.

In 1989, he founded Jackson-Brown Associates, a project management, planning and development consultancy. Phil oversaw the development and construction of affordable housing, community health centres and social agencies across Ontario.

An active community member and social justice advocate, Phil served on numerous boards of non-profit organizations and for 10 years on the Ottawa and Nepean Committees of Adjustment, five as chair.

Graduating from Queen's University with a B.A. (History), Phil earned a M.Sc. (Planning) at the University of Toronto.



Planning Gender-Neutral Public Spaces

By Judy Huynh

It is time for urban planners to take gender neutralization into consideration when designing safe spaces. Gender equality is promoted when planners design spaces that are safe, easy to use and accessible for both men and women.

The gender mainstreaming study, which began in the Austrian capital in the early 1990s, provides an interesting example of how the design of spaces can lead to segregation. The researchers aimed to provide equal access to city resources by redesigning parks in Vienna to eliminate exclusion. During the one-year study period,



Judy Huynh

the researchers found that after the age of nine, the number of girls in public parks decreased while the number of boys remained constant. As a result city planners redesigned parks for greater accessibility. Almost immediately, city officials noticed a change—girls and boys of all ages began to use parks without any one group dominating the other.

We need to eliminate gender-biased spaces. This means focussing less on gender and more on communication, boundaries and interactions. To be considered healthy and vibrant spaces must be designed to promote safety for everyone.

Judy Huynh is an undergraduate Student at University of Waterloo School of Planning.

Book Review

Makers—The New Industrial Revolution

Chris Anderson, 2012, McClelland & Stewart, 247 pages

Reviewed by Dave Aston, contributing editor

A new age of manufacturing is emerging—production from a maker's garage, instead of a large, mass production, assembly line. Could this be a part of the next revolution in manufacturing?

The author of *The New Industrial Revolution*, Chris Anderson, explores this idea in two parts of his book—The Revolution and The Future. He uses an example of the sprinkler and its invention in the 1970s to suggest that we are all makers and that our projects represent the ideas, dreams and passions that we have. This is not anything new; however, the profound shift into the web age has given us the ability to share ideas and opportunities for collaboration instantly and offers the potential to leverage an individual's idea into someone larger than one would attempt alone. Thus transformation is occurring in design, production and distribution stages. The book has numerous examples of what can be described as maker businesses with the specific theme of digital tools and the desktop design and fabrications revolution.

A reference to the cottage industries in the first Industrial Revolution is given to describe the new maker-driven industrial revolution. Cottage industries are characterized as having a distributed form of production, which complemented the larger centralized factories. These industries were more flexible at making things in smaller batches than the big factories, emphasizing and preserving the specialized skills that large machines could not replicate at the time.

Today, a typical maker company is very similar to a cottage industry and its focus is on the kinds of things that big factories do not make. They're often run out of a maker's garage, workshop or a small shared,

collaborative space. They compete through innovation and design creation that allow them to charge a premium for their products and sell directly to consumers without the need for large spaces.

Anderson suggests that as large parts of the manufacturing sector have shifted overseas, it is now time to focus on teaching design. He says, "We are all designers now." References to the transformation of the auto industry and the role of creation, innovation, design and automation helps to tell the story of advancements in the manufacturing sector. Anderson makes the case that "the West [referring to the United States] can rise again" and regain its manufacturing might through the growth of many smaller niche firms, rather than with a few large industrial giants. Anderson believes that the maker movement tilts the balance of the 21st century manufacturing economy toward cultures with the best innovation model, not the cheapest labour.

Anderson's theory is that we are seeing a return to a new sort of cottage industry, through the maker movement. Its potential for growth in the global economy makes this an important consideration for planners. How might planning policies promote makers and what can we do to encourage innovation? How can we accommodate and provide flexibility for these types of industries to establish and evolve? What does this type of industry mean for use of land, buildings and structures?

David Aston, MSc, MCIP, RPP is a partner at MHBC Planning in the Kitchener office, whose work includes provide planning services to municipal and private sector clients. He can be reached at daston@mhbcplan.com.



Dave Aston

IN CONVERSATION WITH ANDREA BOURRIE

The Importance of Partnerships

This is the second in a series of conversations with OPPI President Andrea Bourrie. Interviewed by OPPI Director Scott Tousaw, Andrea talks about OPPI partnerships with other organizations and how these link to the Continuous Professional Learning program and the Institute's public policy efforts. The following text has been condensed and edited; the full interview is available [online](#).

Scott: Why does OPPI spend time creating and fostering partnerships? Do OPPI and its members benefit from these activities?

Andrea: Planning spans many interests and technical areas and as such, our members have varying interests and needs. As well, OPPI represents planners across all of Ontario and we all know that that's a vast geography. In order to best respond to planning issues and members' needs in that broad context, OPPI partnerships make best use of expertise, information sharing, awareness and solutions for implementation. We are able to achieve so much more by working together than by working in isolation.

In my opinion, the member benefit is quite significant. We are able to gain broader access to information and expertise, and make wiser use of resources. I think of the example of the new online educational material that is under development in partnership with the Ontario Public Health Association for planning and public health professionals. It is a really great example of how we are able to bring new material to the forefront, and it is really exciting.



Andrea Bourrie

Scott: How do you see our partnerships linking to OPPI's CPL program?

Andrea: Given the breadth of the planning profession there is really no way that OPPI staff and our District volunteers could deliver meaningful educational opportunities, at the professional level that our members have come to expect, without partnerships. It is really a matter of tapping into resources that exist rather than duplicating. CPL opportunities can be found at District events, at the OPPI Symposium, conferences, courses and events. And the delivery method has been growing. Our members need to engage to get those credits in so many different ways. If members haven't checked out the program offering lately they will be amazed to see in-person events and also some really cool digital

opportunities, such as the [Planning Exchange Blog](#) and [Digital Learning](#). Many involve new or growing partnerships.

The other great thing that has been evolving is that potential partners are seeking out OPPI because they get great value from the affiliation with us. Yes, that creates maybe a little bit more need for diligence on our part to make sure that we are vetting partnerships to ensure they meet our mandate and meet the quality and professional nature that we want our members to enjoy when it comes to CPL. The opportunities are endless. I think that new members in particular are really picking up on this and embracing the opportunities.

Scott: Do these partnerships benefit OPPI's public policy initiatives?

Andrea: Yes, I think that partnerships on public policy initiatives have been particularly strong for OPPI and maybe one of the areas that we have seen the most success. Probably because they have been around longer than some of our newer partnerships.

We participate as part of multi-stakeholder groups to further our public policy efforts, particularly those related to healthy communities. Many members will know the partnership we have had in place with the Heart & Stroke Foundation for many years and with whom we share a joint award of excellence to profile planning as it relates to healthy communities. We work with a lot of different public, private and not-for-profit organizations on policy issues of importance to planners and planning in Ontario.

By working together we are able to achieve so much more than if we were working in isolation. I think it is really a matter of being able to have a broader discussion, hearing broader perspectives that help us shape how we need to be responding to policy issues in the public interest, which, as we all know, is so important to what we do in the planning profession.

There are also a number of associated partnerships through which OPPI really works on trying to advance the Institute's leadership on key planning issues. Through these we can contribute substantially to various topics, but they also contribute to continuous professional learning opportunities.

Scott: What are some other examples of successful partnerships that OPPI engages in?

Andrea: We often partner with Ministry of Municipal Affairs and Housing and Canada Mortgage and Housing Corporation on training opportunities and different policy discussions that are of interest to our members. We also partner with EcoHealth Ontario, which is a collaborative effort to improve health and well-being, and links to OPPI's emphasis on healthy communities.

Scott: It strikes me that partnerships come naturally to planners given the manner in which planners engage in their work. I wonder if you might draw a parallel between OPPI's partnerships and what planners do professionally?

Andrea: That's a great observation. As planners we are naturals at working together as part of teams, multi-disciplinary teams most often. We are able to take a look at issues from a broad perspective, to bring ideas together and generate discussion and opportunities for exploration of solutions. It is that synthesis of ideas that is particularly important when we are dealing with partnerships. But there has to be value on both sides of the equation for the partnership to be successful. Partnerships are a great example of how we practice what we preach in our day-to-day worlds, and we are pursuing this as an Institute as well.

Scott: Thank you Andrea for taking the time to chat with me today. I look forward to your next interview which will be about public policy initiatives and why these are important to OPPI.

Do you have any ideas for future podcasts? We'd love to hear from you at info@ontarioplanners.ca.

Andrea Bourrie, RPP is President of OPPI and principal of her consulting firm Bourrie Planning Services. A member of OPPI since 1991, Andrea has spent her 25-year planning career tackling all kinds of planning, strategic and community development issues.



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PROVINCIAL NEWS

Coordinated Land Use Plan Review

By Leah Birnbaum, contributing editor

The provincial advisory panel, led by former Toronto mayor David Crombie, on the coordinated review of the *Growth Plan for the Greater Golden Horseshoe*, *Greenbelt Plan*, *Oak Ridges Conservation Plan* and *Niagara Escarpment Plan* has completed its work. The panel's report, *Planning for Health, Prosperity and Growth in the Greater Golden Horseshoe: 2015 – 2041*, contains 87 recommendations for the province to consider.

The recommendations generally call on the province to stay the course while highlighting areas of the plans that can be strengthened. Key recommendations include:

- Moving towards increasing intensification targets
- Reviewing the use of mixed targets (residents and jobs per hectare) in greenfield areas
- Further restricting settlement area boundary expansions
- Applying de-designation or phasing tools to reduce the over-supply of designated lands
- Considering stronger criteria to limit the conversion of prime agricultural lands
- Aligning spending priorities with the plans.



Leah Birnbaum

The panel calls for better reporting by municipalities and better monitoring by the province as the plans are implemented. This theme is stressed throughout the report which recommends more guidance tools, standardized mapping and reporting guidelines.

Continuing on the theme of implementation, the advisory panel asks the province to consider limiting OMB appeals for municipal plans and policies that conform to the four plans. It also recommends what many stakeholder groups have been requesting: using terminology of the *Provincial Policy Statement* throughout the four plans; prioritizing intensification areas as places for investment and tying provincial infrastructure funding to the achievement of plan outcomes.

Planners throughout the region are watching closely to see how these recommendations will translate into new provincial policy. Once proposed amendments to the plans are released, a second round of consultations is anticipated.

OPJ has invited three professionals to share their thoughts on the advisory panel's report. Zack Taylor is a professor in the Department of Political Science at Western University, Marcy Burchfield is the executive director of the Neptis Foundation and Laura Taylor is associate professor in the Faculty of Environmental Studies at York University.

Leah Birnbaum, RPP is an urban planning consultant in Toronto and the OPJ provincial news contributing editor. She can be reached via www.leahbirnbaum.ca.

Challenges Remain for Growth Plan

By Marcy Burchfield

There is much to consider in the long-anticipated report by the provincial advisory panel for the Coordinated Review of the *Growth Plan for the Greater Golden Horseshoe, Greenbelt Plan, Oak Ridges Moraine Conservation Plan, and Niagara Escarpment Plan*. It struck many of the right notes, calling for the increased integration of these four land use plans with other transportation, agriculture and environmental plans, and adding a climate change lens.

All 87 of the Crombie panel's recommendations are important to the evolution of the Growth Plan, which aims to curb urban sprawl and to achieve complete communities with a more compact and transit-supportive urban form.



Marcy Burchfield

Important issues Neptis has raised in its research are highlighted below:

Jobs—The issue of employment is not given enough attention in the panel's recommendations. The Growth Plan is about people and jobs but it fails to recognize the evolving economic geography of the region—such as the large concentration of jobs around Pearson Airport that is part of the larger spatial economic structure. As the province gets set to invest billions of dollars in transit, critical

questions remain about how we can better link people to jobs, not just in Downtown Toronto, but across the region.

Land budgeting—The panel calls for a common land budgeting methodology. The 2006–2031 phase of the Growth Plan resulted in differences between how, for example, Waterloo Region interpreted land budgeting requirements compared with other regional municipalities.

Urban Expansion—The panel recommends de-designation, phasing, or other tools to reduce the oversupply of designated greenfield development land in Outer Ring municipalities.

Strategic Intensification—Capacity studies will be required to fulfill a call for municipalities to identify strategic areas for intensification that are aligned with the region's planned and existing transit network so they become a focal point for intensification.

Amendment 2—Although the panel noted that the amount of land needed to accommodate expected growth to 2041 under Amendment 2 will depend on the rate of intensification and the density of new development in each municipality, it did not call for a freeze on urban expansion. Instead, the panel recommends that expansion be contingent on an increase in intensification and density targets.

Agriculture—The panel recommends an integrated agricultural system on lands that lie outside of the Greenbelt.

This has important implications for valuable prime agricultural land that currently is not regulated or protected by the Growth Plan.

Climate change—The panel's call to mainstream climate change adaptation and mitigation policies into municipal official plans is long overdue. Retrofitting climate change policies into the current framework of the Growth Plan will require integrative planning with the province's anticipated Climate Change Action Plan and the alignment of growth with transit investments.

Reporting—The recommendation for a comprehensive annual monitoring program of the implementation of the Growth Plan is crucial because it was during the implementation phase that the challenges of tracking how municipal official plans conformed to the Growth Plan became apparent. With this call, will there finally be an open regional database for land use planning?

Conformity—The panel recommends that the province extend the 2018 deadline for municipalities to conform with Amendment 2 to 2021, primarily because "some key knowledge gaps need to be addressed before further decisions are made about where to grow in the GGH."

How the province transforms the panel's high-level recommendations into policy through amendments to the plans is of critical importance to the future of the region.

Marcy Burchfield is the executive director of the Neptis Foundation.

Integrating Transportation and Land Use Planning

By Zack Taylor

The advisory panel gets it right when it calls for full integration of terminology and goals in the Growth Plan, the Big Move, and the Ministry of Transportation's Multi-Modal Transportation Plan. This requires the province to be more explicit about what actions are needed in specific locations while disentangling the economic development and transportation objectives of a nodal policy.

Ten years after the Growth Plan's adoption, the component that has perhaps aged the least well are the policies for Urban Growth Centres and so-called intensification corridors. The logic was simple enough: beyond increasing the overall density of newly-designated and existing settlement areas, development would be concentrated in a limited number of high-intensity nodes that would mix housing, jobs, regional services and cultural amenities and serve as higher-order transit hubs.

The problem is that the 25 Urban Growth Centres exemplify very different conditions and challenges, as Waterloo professor Pierre Filion documented for the Neptis Foundation. Some, such as

Toronto's central area and Yonge and Eglinton are established nodes in older parts of the metropolitan area that are already served by higher-order transit and the focus of ongoing private investment. Others are the struggling or declining downtowns of towns and cities, such as Brantford and Peterborough. Still others, such as Vaughan and Langstaff, were greenfield sites in 2006, whose form existed primarily in the minds of planners and developers. In short, the policy conflated at least three distinct objectives that operate at quite different scales without providing the guidance or tools to effectively link them: economic development—spurring growth in troubled downtowns—transportation planning—creating a viable regional rapid transit network—and urban design—promoting a greater jobs-housing balance and active transportation within nodes.

This policy direction was further complicated by Metrolinx's later designation of several dozen mobility hubs that bear only partial relation to the Growth Plan's Urban Growth Centres. Municipal planners must contend with overlapping designations, standards and objectives as they implement the regional transportation plan and the Growth Plan. It would be better to separate out distinct objectives and the means to achieve them.

It is critical that any amendments to the Growth Plan resulting from the panel's recommendations dovetail with those resulting from the 10-year review of The Big Move, which takes place this year.

Zack Taylor, MCIP, is a professor in the Department of Political Science and Local Government Program at Western University.



Zack Taylor

PROVINCIAL NEWS

Growing the Greenbelt in Area and Approach

By Laura Taylor

The Greenbelt is working and there is “widespread support” for the province's approach to growth management in the Greater Golden Horseshoe region, according to David Crombie's advisory panel report on the 10-year review of the GGH plans.

The panel's report is a big one, with 165 pages of discussion, including 87 recommendations for the ministers of Municipal Affairs and Housing and Natural Resources and Forestry on ways to amend and improve the plans. But no fundamental changes to the plans are proposed: the existing plans should remain—but policies and language need to be “harmonized,” not only with each other but with the *Provincial Policy Statement* and the Big Move. Key examples of policies and terms to be harmonized are those related to agriculture (recommendation 33), natural heritage (recommendation 44), green infrastructure and low impact development



Laura Taylor

(recommendation 56), and climate change (recommendation 67).

Within the existing planning framework, though, the Greenbelt area could be expanded and the approach extended.

A big idea put forward by the panel is to extend the Greenbelt “approach” to environmental protection across the GGH. The panel recommends creating an integrated agricultural system (recommendation 28) and extending natural heritage system policies (recommendation 44) and water resource policies (recommendation 40) to non-Greenbelt lands within the Growth Plan area. The systems approach is the basis for the protected countryside in the *Greenbelt Plan*, which has an agricultural system and a natural heritage system. Natural heritage systems already are defined in the *PPS* to improve connections between natural heritage features, but agricultural systems are not and this recommendation could be significant if a vision of connected, integrated farming across the GGH is supported and realized. And while the Greenbelt provides certainty for nature conservation within it, questions about the veracity of conservation policy in the rest of the Growth Plan area prompted the panel's recommendations to truly extend protection beyond the *Greenbelt Plan* area. Also, the report reflects an increase in concern around water generally—confirming the policy direction of the *Oak Ridges Moraine Conservation Plan*—by identifying a need for the province to go even further in protecting water resources. It recommends that integrated watershed planning should be a “prerequisite” for settlement area expansion, with a focus on improving mapping (recommendation 43).

Expansion of the Greenbelt will definitely be part of the province's upcoming amendments. Recommendation 71 is for the province to lead a process to grow the Greenbelt beyond its current boundary “using a systems approach, based on areas of ecological and hydrological significance where urbanization should not occur.”

Recommendation 72 is to add Urban River Valleys to the Greenbelt, an idea already contemplated in the *Greenbelt Plan*, but now implementation is proposed to be led by the province. Growing the Greenbelt should not be a surprise, as it was part of the Minister of Municipal Affairs and Housing's mandate letter following the last election. Also, in its 2015 plan review, the Niagara Escarpment Commission proposed significant expansions to the *Niagara Escarpment Plan* area.

The Greenbelt should get bigger and better, according to the panel's report, and not retract. Boundary changes are not part of the panel's recommendations, rather, recommendation 73 identifies official plan reviews and settlement area expansion processes as the venues for making the case for any such changes.

Laura Taylor, RPP, is an associate professor of environmental planning in the Faculty of Environmental Studies, York University. She grew up on the urban-rural fringe in Ottawa where she first learned about Jacques Gréber's city plan, including the National Capital Greenbelt, and has been interested in greenbelts ever since. Laura is a member of the Ontario Greenbelt Council and has written several articles on Toronto's greenbelt experience. Thanks to Lara Nelson for reviewing an earlier version of this article.

The Greenbelt is governed by three plans: the Niagara Escarpment Plan, the Oak Ridges Moraine Conservation Plan, and the Greenbelt Plan (protected countryside designation). Together with the Growth Plan, the Greenbelt Plan was designed to rein in urban sprawl in order to prevent the loss of farmland and greenspace, and to improve air and water quality in the region.

The Odd-shaped Lot Dilemma

By Ian Flett

There's not much that is more objective than numbers to define zoning regulations. Heights are most often limited to a maximum number of metres, as are set-backs, depths and frontages. However, one numeric standard bedeviled planners in a recent case heard before the Ontario Municipal Board: lot area.

In the matter of *Yang v. Toronto (City)*¹, a land owner appealed a committee of adjustment's refusal of an application for severances and variances, including for smaller lot frontages and areas than permitted. Neighbours responded to the appeal concerned the proposed lots would be the smallest in their community. Toronto's official plan recognizes that the physical character of the city's neighbourhoods should remain stable. Expert planners for both parties agreed on a study area and submitted lot dimension data for rectangular and polygonal lots in their areas as evidence. Curiously, the lot areas for the same polygonal lots differed significantly between the two planners' studies. The obvious question was how could that be?



Ian Flett

Municipalities across Ontario often rely on the Municipal Property Assessment Corporation for numerical data as it relates to lot dimensions. Since calculating the area of a polygonal lot requires a complex formula, MPAC has simplified the task by relying on what it calls the effective lot size. It calculates this figure by averaging what MPAC calls effective frontage and effective depth, which are themselves arrived at by averaging. The result is a number that approximates irregularly shaped lots but is less than the actual lot size.²

In contrast, zoning by-laws across Ontario approach lot areas differently. Toronto Zoning By-law 569-2013 defines lot area as "the horizontal area within the lot lines of a lot." Mississauga and Thunder Bay use a similar definition: "[Lot area] is the total horizontal area within the [lot lines] of a [lot]," while Oakville uses the same language but excludes an area that is "covered by water" or "below the top of bank as determined by an Ontario Land Survey." Previous Toronto zoning by-laws similarly excluded sloped lands from the total lot area. Municipalities in other jurisdictions, such as in Mill Valley, California use an effective lot area that calculates the entire horizontal area of a lot, but excludes public trails and road easements.

The most accurate way of calculating lot area in Ontario, short of asking a surveyor to calculate it on the ground, is to use data from Teranet. To calculate an accurate lot area Teranet permits users to delineate each line of an irregular lot based on its database.

In this OMB hearing the neighbourhood's expert planner relied on Teranet to determine the area of pie-shaped lots on cul-de-sacs in the study area. The difference in lot areas was at least 51 per cent and as much as 76 per cent. In one case, a lot with an effective area of 217 metres square had an actual lot area of 900 metres square; the least discrepancy was measured on a lot with an effective area

of 251 metres square that had an actual area of 468 metres square.

In its decision, the board indicated it was not inclined to choose between datasets since experts frequently use both sources in their evidence before the board. It also relied on the applicant's planner's opinion that a more important test than the numerical standards of actual lot area or frontage is how people would likely experience the new lots. In this instance people's experience of the new lots did not differ from that of the established lots.

What is most interesting is the board also found the City of Toronto itself relies on MPAC data for polygonal lots when reviewing applications for minor variances, notwithstanding the city's own definition of lot areas.

This last reason for accepting the inaccurate results is the most interesting one. It may signal to municipalities to pay closer attention to how they have defined lot area if they wish to control the area of severed lots. For planners, the presence of curvilinear and other polygonal lots may require deeper investigation when assembling study area statistics in their area studies for the board.

Ian Flett practices municipal and administrative law at Eric K. Gillespie Professional Corporation. Ian dedicates his pro bono hours to better cycling infrastructure in Toronto.

Endnotes

- ¹ [2015] O.M.B.D. No. 447; PL141151
- ² MPAC provides a detailed explanation of how it calculates lot area on its website at <https://www.mpac.ca/PropertyOwners/Procedures/procedureForTheCalculationFrontageDepthArea>

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Revisiting Growth Assumptions through ROI Analysis

By Rob Voigt, contributing editor

For all the discussions about the benefits of open data, new ways of measuring and developing statistics, and engaging the public through mobile technology, we need to remember that progress can also result from changes in perspective on how we use what is already at hand. The following briefly describes a research project that does just that by examining available data to provide significantly important, if not critical, new insights for municipalities. Specifically, the research used a GIS-based return-on-investment analysis to understand the relationship between built form and tax revenues and the limitations of zoning provisions. The results are significant and can contribute to the ways planners and municipalities undertake effective placemaking, community development and economic development.



Robert Voigt

Raw material

To help frame this important discussion we should think of a community's land base as its raw material and the tax base its product. When a community supports, facilitates and regulates development it should consider the impact on property tax revenue it receives from this limited resource. After all the success of a community is dependent on this revenue for the services, infrastructure and assets that it funds.

Planners know that the form a development takes directly impacts walkability, placemaking, economic development, accessibility, affordability and community health. Done well, all are characteristics of successful, healthy, smart communities across the continent. However, there is still a prevailing assumption among municipalities that growth and new development, which replaces older forms of development, inherently creates wealth, by generating property tax revenue for the municipality.

My planning associate John Douglas and I have been reexamining these assumptions by looking at the tax productivity on a per unit of land basis, as opposed to a per unit of development or cost of development basis. To do this we have been comparing sites within a community that are generally the same in all aspects except for the form of development by conducting GIS-based ROI analyses.

Reframing built form assumptions

Taking data that is already available we compared sites and examined various relationships such as those between form of development, tax revenue, unit density and lot coverage limits, as

set out in the zoning by-law. The findings are clear and consistent with those of numerous other similar studies across the United States featured on the [Strong Towns website](#). In each case, the traditional more urban form of development far exceeded the tax revenue of the suburban mall-type development for the local context. Even residential buildings that had been adapted to commercial uses at the edges of downtowns outperformed the nearby suburban-type developments with the same land use designation.

Sites, all within walking distance to each other, were selected based on their built form characteristics, relative to the community context. These ranged from higher density traditional downtown multi-storey buildings, to less dense sites that are auto-centric in design, such as strip malls. Residential sites are examined in a similar manner. The results are quite staggering. Consistently, our work demonstrated that traditional developments that are less than ideal, in that they arguably need improvements, generate hundreds of percentage points more tax revenue per hectare annually than sites that have been relatively recently redeveloped into an auto-oriented mall only blocks away.

Regulations that direct development to forms which generate a lesser productivity (per hectare) than others, have a significant impact on those communities' capacities to meet their long-term servicing and infrastructure replacement obligations. In its simplest terms, these forms of development cost far more to service than they generate in tax revenue.

From the results of this project it is clear that assumptions about new development need to be reframed in terms of built form—rather than cost of construction or investment—impacts on community wealth generation and required lifecycle infrastructure investments. The information provided by the ROI analysis is potentially critical to the planning for healthy, sustainable communities.

Considerations

Add to these findings measures associated with other well-known indicators of community health, well-being and economic vitality and it is clear that significant value judgements need to be made and assumptions about growth equaling wealth that need to be reexamined.

Yes, there are nuances to this discussion that need to be explored, but this analysis highlights the importance of updating the way planners view community design and development.

As municipalities gain knowledge through ROI analysis they become better equipped to determine the long-term impacts of growth and development on the tax base and to improve official plan policies and zoning by-laws to maximize wealth building potential. It will enable them to define strategic initiatives that will build on the strengths of the most valuable forms of development for municipality-owned lands to maximize ROI and community benefits.

Robert Voigt MCIP, RPP is a professional planner, artist and writer. He is recognized as an innovator in community engagement and healthy community design. Robert is the chair of the OPPI Planning Issues Strategy Group, member of PPS' Placemaking Leadership Council, writer for Urban Times and publisher of the CivicBlogger.

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