

The Draft Official Plan

Climate Change: Missing in Action

Climate Change
The Lens for the Five Big Moves

Heather Pearl, Co-chair, Champlain Park Community Association August 22, 2019

How We Got Here: Loss of Ecosystem Services

Early spring, 2009 – 5 Mature Oaks Clearcut. No Trees Remain. Property Severed.

Summer 2007 – 5 Mature Oaks (80 to 100 years old) Line the Southern Edge of the Property

Community: More than 50% tree cover loss since 2007
Each new build: More than 50% permeable surface loss since 2007
Since 2007, storm & sanitary sewers increasingly affected; streets now growing sinkholes

Spring 2019: Waterfront Property in Champlain Park

"The Ottawa River is creeping back along and above the storm drains into the north-end of our neighbourhood. The woods right across from these houses and the school is great habitat for beavers right now. I would need well-above-the-knee boots to walk there."

"Champlain Park is luckier than parts of Westboro Beach Community and Britannia though. I think our residents will be ok with the sandbags that they've put down."

The Five Big Moves
Kudos on these Comprehensive Policy Directions

- The Moves show us on the right track for a new Official Plan.
- This Direction provides hope for a more sustainable future.
- Use the Climate Change Lens when fleshing out all Policies & Programs
- Integrate all five Big Moves into a multi-dimensional matrix that keys on Environmental Sustainability and Resiliency in the face of Climate Change:
 - Climate Change, Energy and Public Health
 - Growth Management
 - Mobility
 - Urban and Community Design
 - Economic Development
- Impacts on health and quality of life will have serious consequences if we don't get this right.

FCA – Building my City
City Planning: Focus on Health and Environment

Champlain Park
Kitchissippi Symposium
Intensification and Infill Development
February 27, 2008

Designated Substance Reports Demolition Permits
Closing the Gap: OHS and Public Health and Safety
Publication of OHS's Assessments, OHSU
Heather Pearl

Carleton Avenue Champlain Park
Intensification and Front Yard Set-back

Neighbourhood Trees
Our Vanishing Urban Forest
Champlain Park Community Association (CPCA)
Heather Pearl, Co-Chair
January 24, 2011

Neighbourhoods
More than just Building Sites

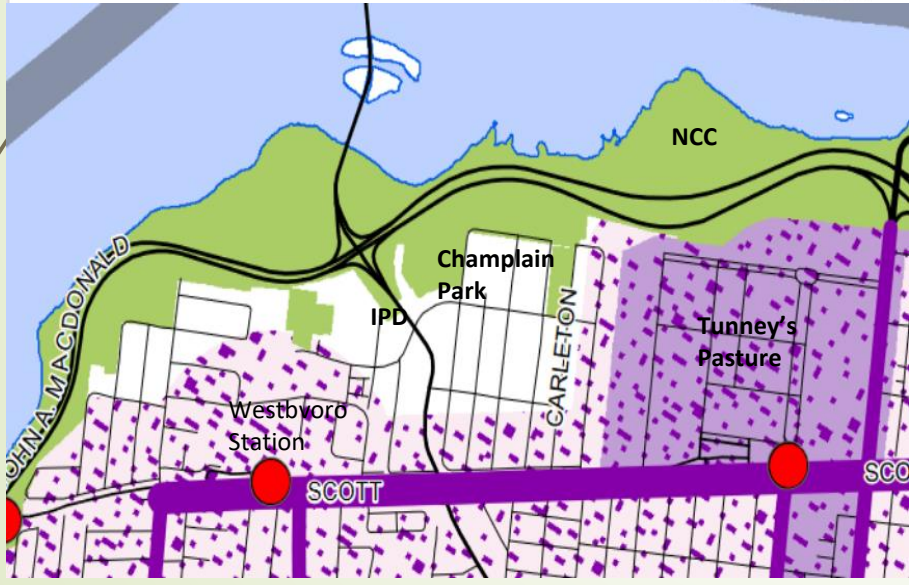
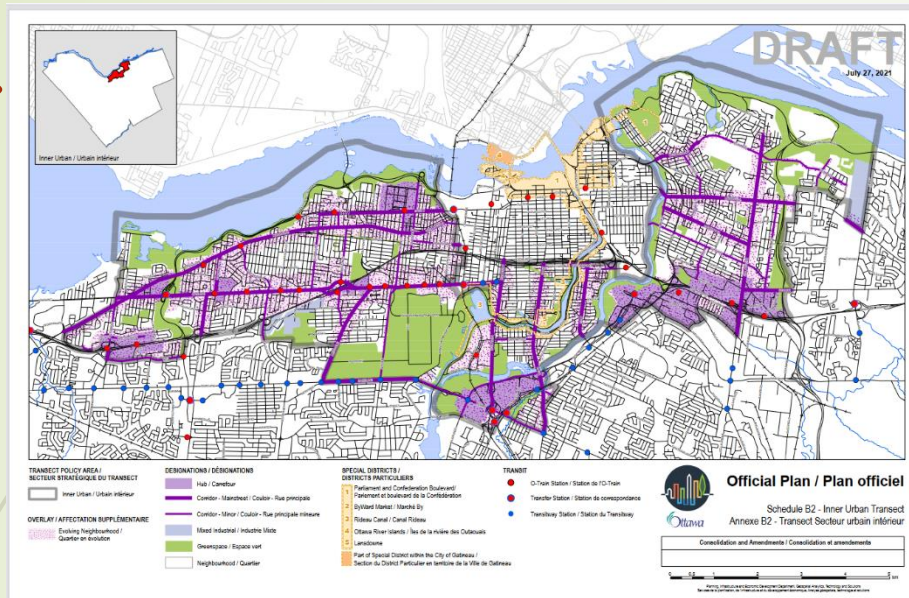
Champlain Park
Infill II By-law
Working Toward Compatible Development

Heather Pearl
Co-Chair
Champlain Park Community Association

April 23, 2016

Climate change forgotten in the Growth Management Strategy

Inner Urban and Evolving Overlay Map



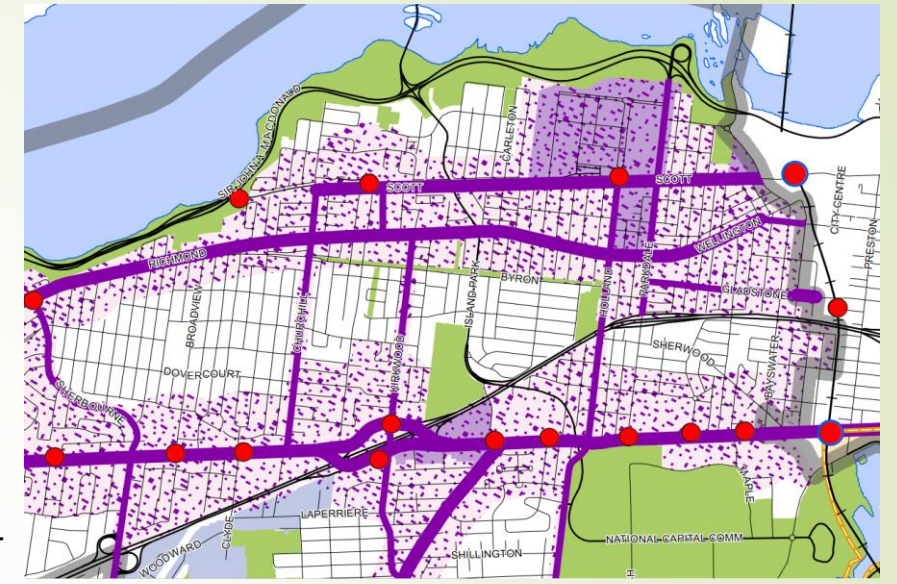
Evolving Overlay

“Context” in OP defined as what OP policies & future zoning will promote within Transect Boundaries.

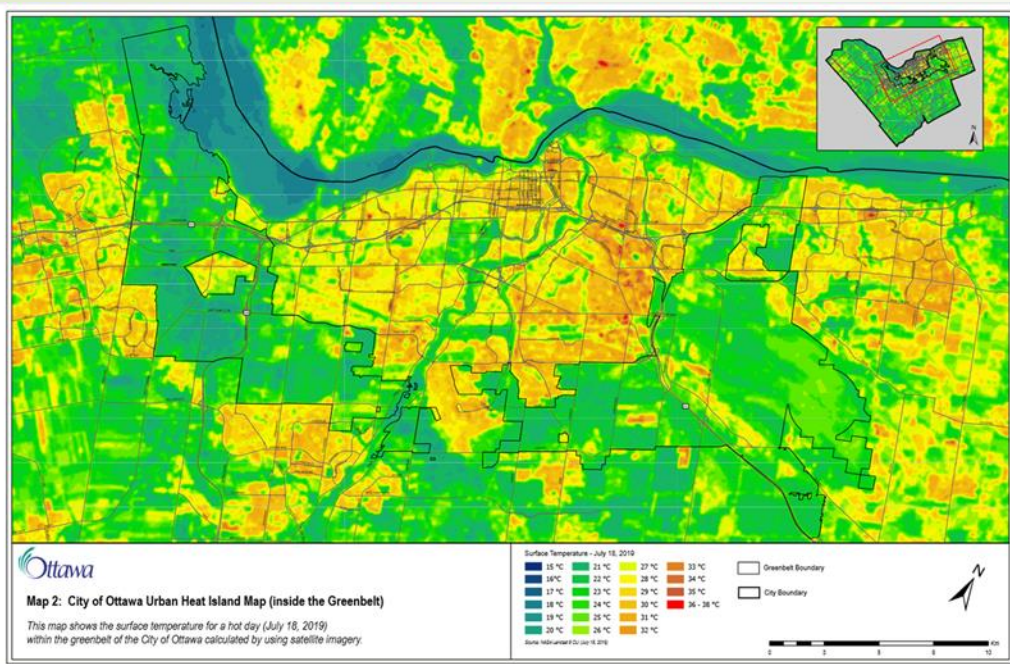
Density drives the Growth Management Strategy

- *GMS lacks needed policy links to, and overrides, OP climate change and health policies;
- *Policies promote high rise street canyons, corridors, isolate neighbourhoods, lead to vehicle use, poor air quality;
- *New Policy hooks to eliminate or severely restrict viable building setbacks, increase heights;
- *No room in front or rear yards for a tree canopy to mitigate effects of climate change, including health impacts;
- *Increases need for air conditioning and cooling stations for those who cannot afford A/C;
- *No potential for parks, greenspace, public amenities;
- *Equity options missed;
- *Walkability, livability vanish.

Kitchissippi Hubs, Corridors and Neighbourhood Nubs



July 18, 2019: The Urban Heat Island Effect: A Hot Day in Ottawa, → Affects neighbourhoods differently, depending on tree canopy cover

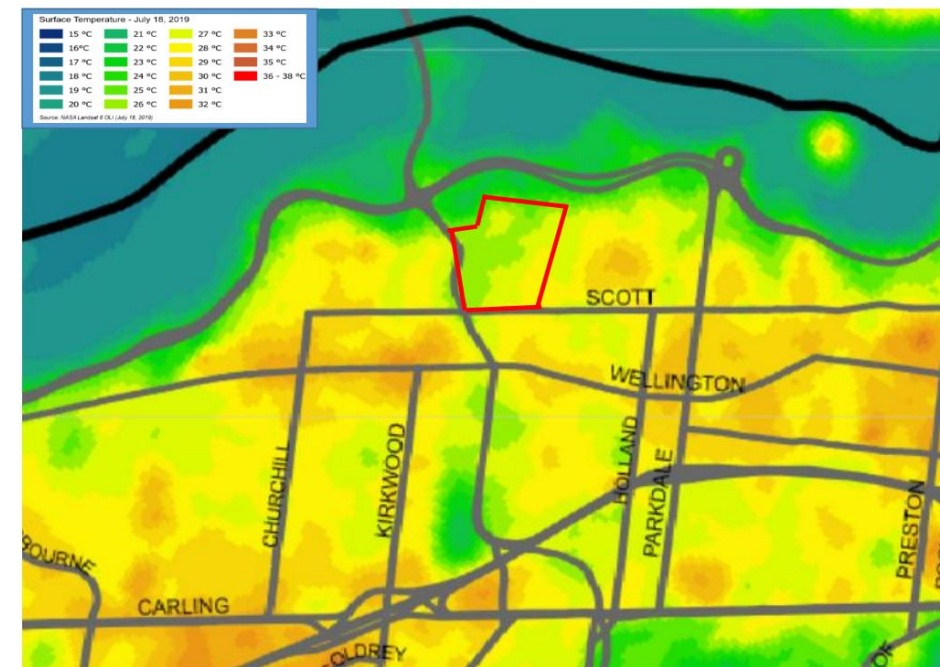


(City of Ottawa Climate Resiliency Strategy

https://engage.ottawa.ca/climate-resiliency/news_feed/urban-heat-island)

Kitchissippi Urban Heat Island Map, focus on Champlain Park:

- Champlain Park (approximate area outlined in red) is an Oasis of Cooler Temperatures due to (Remaining) Mature Tree Canopy.
- Hottest part of neighbourhood (east & south) occurs where intensification has driven significant tree canopy losses since 2007.
- Neighbourhood-adjacent cooler temps in Tunney's Pasture due to treed berms in west-side parking lots & Northwestern Ave rear yards.



Reducing urban heat islands to protect health in Canada (2020-04-29)

<https://www.canada.ca/en/services/health/publications/healthy-living/reducing-urban-heat-islands-protect-health-canada.html#a1>

2.1 Extreme heat is a health risk to Canadians

- ...dehydration, fatigue, and an inability to perspire or cool the body;
- ...spectrum of heat-related illnesses, such as heat rashes, cramps, (to) heat stroke;
- ...worsen existing conditions, such as cardiovascular and respiratory diseases, lead to stroke, and increase susceptibility to infectious diseases;
- ... disrupt people's daily activities and enjoyment of outdoor spaces.

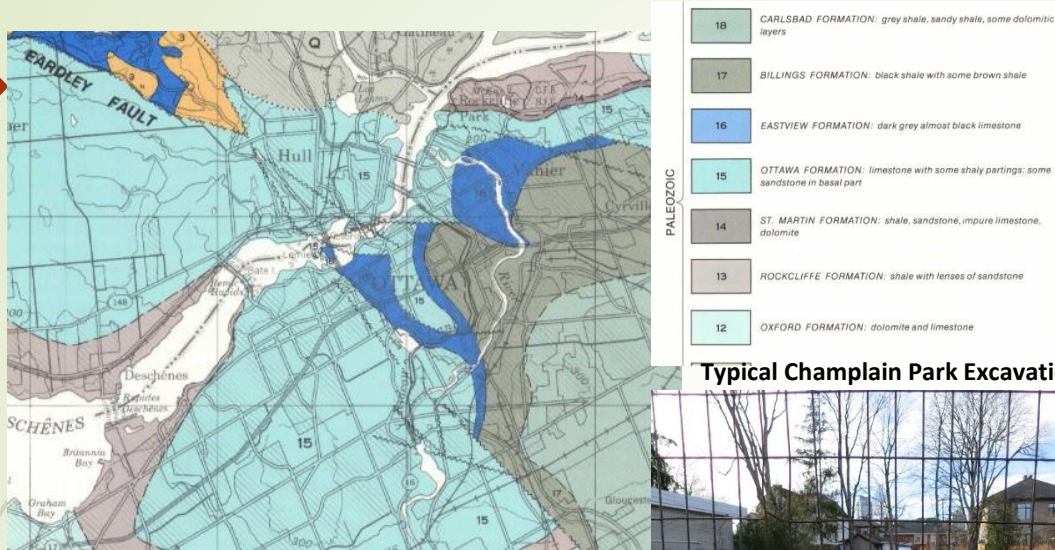
Certain populations, including young children, people with chronic illnesses, occupational groups such as construction workers, physically active people, Indigenous Canadians, the marginally housed or homeless, and socially isolated seniors, are particularly at risk;

The health impacts from high temperatures are already being felt across Canada.

2.2 What is the urban heat island effect?

Various factors can magnify the health impacts of extreme heat events, including poorly designed buildings that heat up in summer, high numbers of people vulnerable to heat, and neighbourhoods with low tree canopy and high percentages of built surfaces.

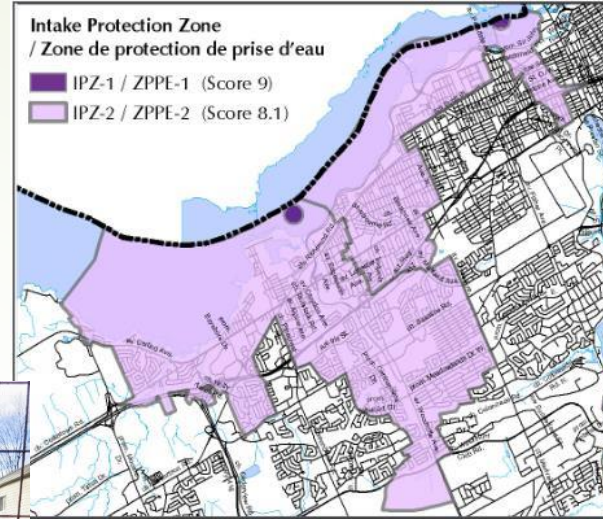
Geological Survey of Canada Map: Inner Urban Transect Geology



Typical Champlain Park Excavation



The Inner Urban Transect overlies Drinking Water Intake Protection Zone IPZ-2 (Score 8.1)



Intake Protection Zone / Zone de protection de prise d'eau

- IPZ-1 (Score 9)
- IPZ-2 (Score 8.1)

IPZ-2 includes the on and offshore areas where flowing water and any pollution would reach the intake pipe within two hours.

Vulnerability is measured on a 10-point scale and shows how quickly water (and pollutants) move from the surface to the aquifer. A high vulnerability area has a score of 8 or 10

<https://documents.ottawa.ca/sites/documents/files/Drinking%20Water%20Source%20Protection%20in%20Ottawa.pdf>

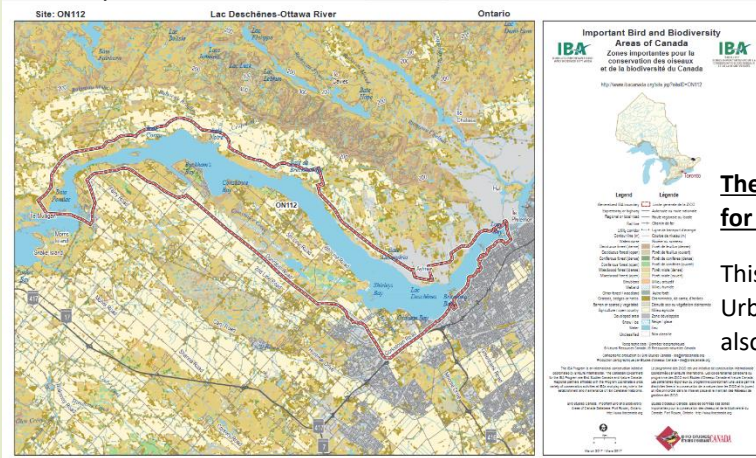
Ottawa Intake Protection Zones

The Current Transect / Overlay Approach: Impact on Wastewater and Stormwater Control

Everyone lives on a watershed. Problems with water start with the land.

Naturally limited permeability, climate change induced summer and winter extreme rain events that overwhelm storm sewers, volume of large-footprint intensification since 2007, make storm water runoff an ongoing problem for all property owners, their neighbours and Ottawa River water quality.

Important Bird Area: Lac Deschenes – Ottawa River, Ottawa, Ontario



The IBA Program is an international conservation initiative coordinated by BirdLife International. The Canadian co-partners for the IBA Program are Birds Canada and Nature Canada. <https://www.ibacanada.org/site.jsp?siteID=ON112>

This is deemed a “Globally Significant” area. The threat level is already too high. It will increase exponentially if the Inner Urban and Downtown Transects “evolve” to take the kind of intensification proposed in the Draft OP. Protecting ecosystems also protects human health.

Ottawa's **Urban Canopy** one-pager cites Ottawa's “..current urban tree canopy cover of 25%.”

- notes that it should be 40% in each neighbourhood, but that intensification will prevent this.

The NCC, Ottawa and Gatineau collaborated to produce a **Tree Canopy Assessment, Canada's Capital Region**, published in the Fall of 2019: <https://ncc-ccn.gc.ca/our-plans/tree-canopy-assessment-canada-capital-region>

- **The interactive map is based on 2017 data:** . <https://ncc-ccn.maps.arcgis.com/apps/View/index.html?appid=0498e91f83054c858d6c43b2d9cb3285>
 - **It's easy to see that the tree canopy is not distributed equitably.**
- THE NEED FOR GREEN (from the NCC Report)
 - Cities are facing a host of environmental challenges, from stormwater runoff to the urban heat island effect. At the same time, cities are seeking to become more livable and sustainable to attract businesses and residents, while ensuring equitable access to environmental amenities. Trees provide a host of ecosystem services. Their canopies provide habitat for wildlife. The transpiration process reduces summer temperatures. And research has shown that trees can even improve social cohesion and reduce crime. A healthy and robust tree canopy is crucial to the sustainability and livability of our urban areas.

OP Figures 5, 8 and 18:

- Buildings too close to the streets for there ever to be a viable tree canopy, few trees shown and not enough room in rear yards for canopy trees to grow successfully.
- The OP is at odds with Science, despite **2.2.3 5) Reduce the urban heat island effect and help protect the vulnerable from extreme heat.**
 - *Rising temperatures due to climate change will affect the liveability of our communities. The design of the built and natural environment also impacts how temperatures are felt. In built-up areas with limited greenspace temperatures can increase by several degrees due to the urban heat island effect. Mitigating the impacts of heat and protecting the most vulnerable will require actions such as providing more shading, reducing the urban heat island effect and providing access to cooling amenities. These actions will also be integrated into the City's various design guidelines*

Figure 5

15-Minute Neighbourhood



Figure 8

BUILT FORM & HEIGHT MAXIMUM

4 Height Categories



Figure 18



Meeting Ottawa's Housing Needs Over the Next 25 Years Means We Deal Now with the Climate Emergency: Crisis resolution starts in neighbourhoods.

Climate scientists anticipate that Ottawa will continue to get warmer, with significant increases in extreme heat events, and more variable and unpredictable precipitation (droughts and heavy rains) and other extreme weather (New Official Plan - Climate Adaptation and Resiliency, March 2019, p. 3)

Preserving and enhancing urban trees and greenspaces is fundamental to Growth Management in the 21st century. Planning to incorporate trees and greenspaces is an equity issue. It is critical to planning for affordable urban growth.

Ontario Health Study Newsletter, November 2015

<https://www.ontariohealthstudy.ca/the-ontario-health-study-newsletter-november-2015/>

- “Using data from the Ontario Health Study (OHS) and City of Toronto forestry records, researchers at the University of Chicago have shown the positive effect that living near trees can have on our health.”
- “The study found that people who live in neighbourhoods with a higher density of trees on their streets reported having a better perception of their health and significantly fewer cardio-metabolic conditions such as high cholesterol, heart disease, stroke and diabetes. The researchers also discovered that “having 10 more trees in a city block, on average, improves health perception in ways comparable to an increase in annual personal income of \$10,000 and moving to a neighbourhood with \$10,000 higher median income, or being seven years younger.”

Smart infill and climate-adaptive changes made in all neighbourhoods: mature tree preservation, setbacks and building heights that provide room for tree planting and growth, sustainable planting practices and care, green building materials, green roofs, bioswales etc. all have positive local impacts on health and well-being.

A 15-minute neighbourhood is not one where residents scuttle between air conditioned / heated residences and air conditioned / heated shops.

- **Walkable Ottawa's** proposal for a way forward is well worth considering. It calls for modelling in individual neighbourhoods and collaborating with community members on infill proposals. This more climate-friendly, gradual approach to intensification has the potential to provide human scale housing for a diversity of incomes, without harming community character.