

DEVELOPMENT IN DOWNTOWN TORONTO

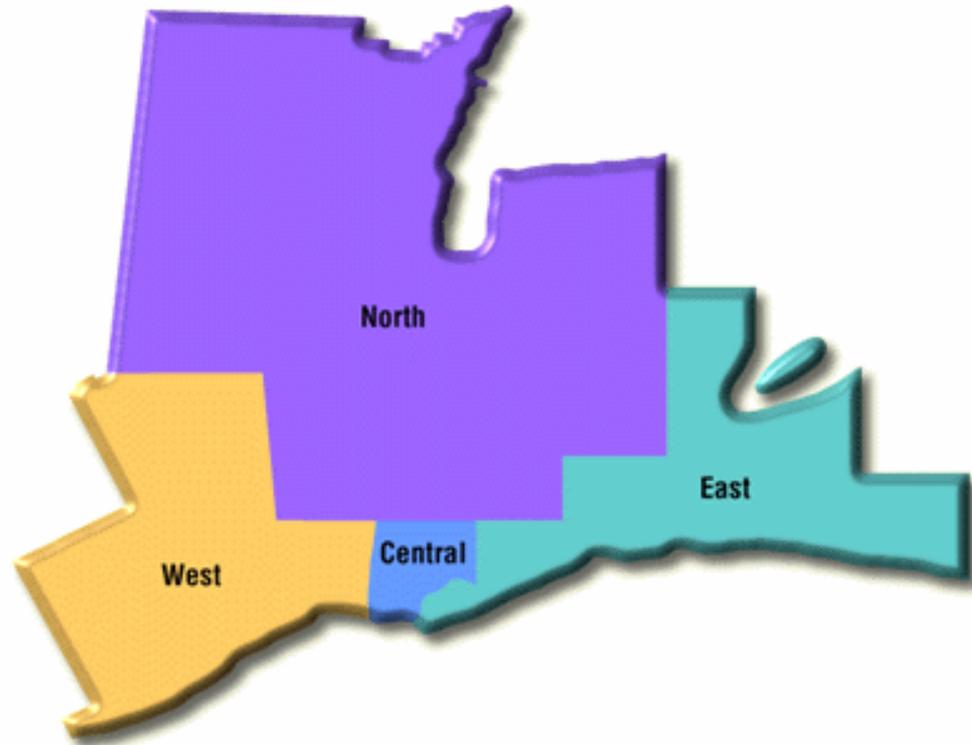
Toronto as an eco-city? Lessons for Hong Kong

Objectives

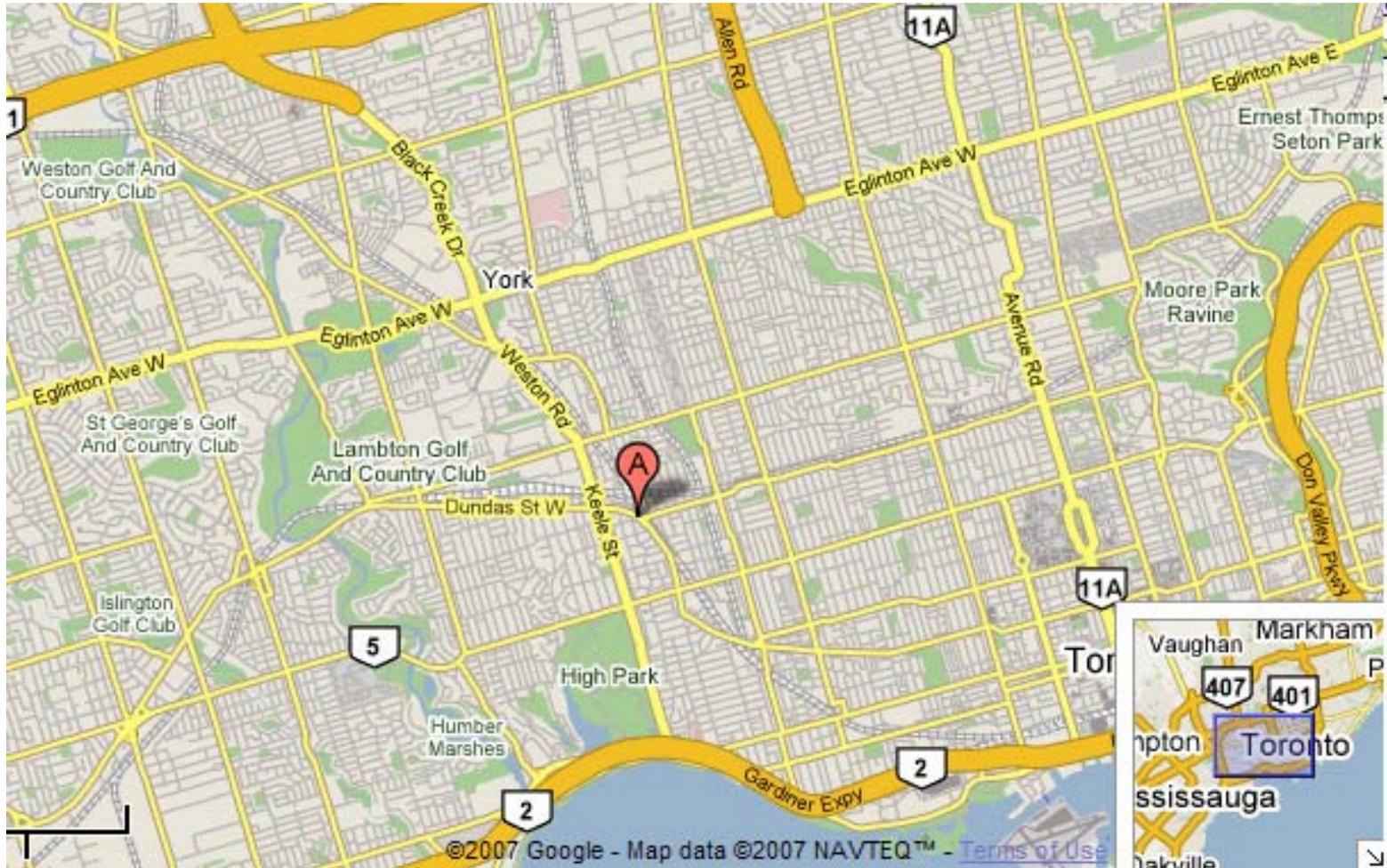
- (1) Examine government policies about environmental protection
- (2) Examine environmental awareness of local residents
- (3) Examine environmental friendly infrastructure in Toronto
 - ▣ Transport
 - ▣ Greenspace
- (4) Comparison with other cities
 - ▣ e.g. Singapore, Hong Kong
- (5) Lessons for Hong Kong/Lessons for Toronto
- (6) Suggestion for improvement

Study Area

- Real Estate Board: 86 districts



□ West District



Significance of the Research

- *'An ecocity is a human settlement that enables its residents to live a good quality of life while using minimal natural resources.'* (Ecocity Builders, 2004)

- Similarity to Hong Kong

- ▣ Serious air pollution

- 1,000 deaths/year, 5,500 people hospitalize annually

- ▣ Smoking-ban

- ▣ Green-roofs emphasis



Significance of the Research

- (1) Government Policies: Air
 - 20/20 The Way to Clean Air
 - Clean Roads to Clean Air Project
 - Green Fleet Transition Plan
 - Greenhouse Gas Analysis
 - Hybrid Buses
 - Bio-Fuel Testing
 - Corporate Smog Alert Response Plan

Significance of the Research

□ (1) Government Policies: Air

- 20/20 The Way to Clean Air provides resources to residents in the Greater Toronto Area to help them reduce home energy use and vehicle use by 20 percent
- The FREE 20/20 Planner, a practical step-by-step energy reducing guide, can help citizens save money and energy
- 20/20 is a campaign of health units in Toronto and the regions of York, Durham, Peel and Halton
- Lessons for Hong Kong



Significance of the Research

- Comparison with Blue Sky Action in Hong Kong
 - ▣ Same objectives
 - ▣ One of the most important methodology
 - ▣ Guiding citizens to reduce their energy usage



Significance of the Research

- (1) Government Policy: Water
 - ▣ Watershed Planning
 - ▣ Source Protection for Drinking Water
 - ▣ WaterSaver Programs
 - ▣ Managing Storm Water
 - ▣ Wet Weather Flow over the Long Term
 - ▣ Toronto's Beaches
 - ▣ Wastewater Master Plan
 - ▣ Sewer Use Bylaw
 - ▣ Don River Revival

Significance of the Research

□ Wastewater Master Plan

- The City of Toronto is working on a Biosolids and Residuals Master Plan that will provide direction on the future management of biosolids and other water-borne residual matter generated by the City's eight water and wastewater treatment plants to the year 2025.
- The plan will ensure that the City's management of its biosolids and water residuals is cost efficient, environmentally sound and sustainable.



Significance of the Research

- Wastewater Treatment in Hong Kong
- Purely wastewater treatment
- Usage of the bio-solids—full of nutrition to fertilize lands or other usages.



Significance of the Research

- (2) Greenspace and Parks
 - ▣ Official Plan for the City of Toronto
 - ▣ Principles for success
 - ▣ A city of beauty
 - ▣ The city is well maintained with clean and beautiful green spaces, including communication and rooftop gardens



Significance of the Research

- (2) Greenspace and Parks
 - Parks
 - Facilities
 - Green roofs
 - Green roof system



Significance of the Research

- (2) Greenspace and Parks
- High Park
 - ▣ The largest park in the city
 - ▣ A large pond, sporting facilities, zoo and museum
- Toronto Islands
 - ▣ A little oasis from the Harbourfront
 - ▣ Boating, canoeing, biking, amusement park



Significance of the Research

- (2) Green roofs
 - ▣ One of the first cities
 - ▣ The Green Roof Incentive Pilot Program
 - ▣ Commercial
 - ▣ Institutional
 - ▣ Residential



“Its buildings make best use of sun, wind and rainfall to help supply the energy and water needs of occupants. Generally multistory to maximize the land available for greenspace.” (Ecocity Builders, 2006)

Significance of the Research

□ (2) Green roofs

▣ Extensive green roofs

- Low in weight, cost and maintenance
- Thin soil, grasses, wildflowers

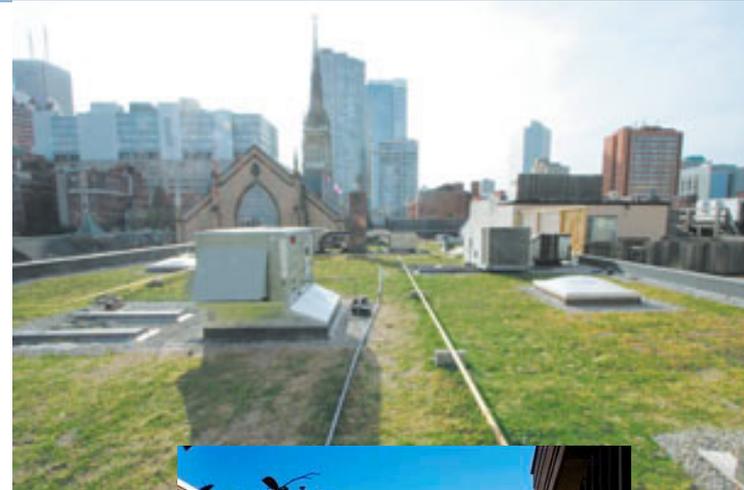
▣ Intensive green roofs

- heavier, more costly, more maintenance
- Thicker soil, shrubs, trees, vegetable, deep-rooted plants



Significance of the Research

- (2) Green roofs
 - ▣ Commercial building
 - Easy-green extensive green roof system
 - ▣ Institutional building
 - Intensive green roof system
 - Junior public school



Significance of the Research

- (2) Green roofs
 - ▣ Residential building
 - Xeroflor XF301 system
 - Pre-cultivated vegetation blanket



Hong Kong



□ (2) Greenspace and Parks

□ Functions of urban parks

- ▣ Kowloon Park, Hong Kong Zoological and Botanic Garden
- ▣ Little facilities, playgrounds
- ▣ Little interaction between human and environment
- ▣ Community cohesion

□ Green roofs

- ▣ No green roofs
- ▣ Lady Shaw (extensive green roof system)



Significance of the Research

□ (3) Transport

*“The majority of its residents live within **walking or cycling** distance of their workplace, to minimise the need for motorised transport.” (Ecocity Builders, 2006)*

*“Frequent **public transport** connects local centres for people who need to travel further.” (Ecocity Builders, 2006)*



Significance of the Research

□ (3) Transport

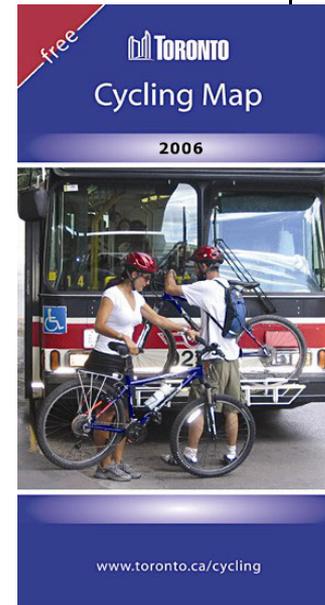
□ Pedestrian (PATH)

- Better pedestrian access
- Downtown Toronto's underground walkway
- Linking 27 km of shopping, services and entertainment
- Weatherproof comfort
- Pedestrian linkages to public transit



Significance of the Research

- (3) Transport
 - Idling by-law aimed at improving air quality in city
 - New “Green” vehicles join Transportation Services fleet
 - Bike Plan
 - Bicycle lanes
 - Necessary link between cycling routes or pathways



Significance of the Research

- (3) Transport
 - ▣ RESCU: Traffic cameras, vehicle sensors
 - ▣ New traffic lights and street lights
 - Save energy
 - LED (Light Emitting Diode) for traffic lights



Significance of the Research

- (3) Transport
- In short, The transportation in Toronto
 - ▣ Promote the use of public transport
 - ▣ Promote pedestrian walkways
 - ▣ Promote cycling
 - ▣ Promote environmentally friendly transportation
 - ▣ Goal of a green, clean and beautiful city
 - ▣ Lessons for Hong Kong

Significance of the Research

- Hong Kong's traffic
 - Serious problem
 - Controversy on Central-Wanchai Bypass
 - Sources of pollution



Significance of the Research

- Similarity to Hong Kong
- Lessons to Hong Kong
- Ecocity?

Methodology

- (1) Primary data
 - ▣ Interview with local residents
 - Environmental awareness
 - Opinion towards government policies
 - Satisfaction about urban open spaces
 - ▣ Possible interview with officials from *Urban Development Services Department*
 - 4 Offices in Downtown
 - Government policies
 - *Urban Development Institute*



Methodology

- (1) Primary data
 - ▣ Visits to urban open/green spaces
 - ▣ High Park
 - ▣ Green roofs

- ▣ Examination of environmental friendly infrastructure
 - E.g. recycling bins

Methodology

- (2) Secondary Data
 - Journals
 - On-line resources
 - Government Policies

- Comparison with other cities
 - Singapore: NEWater programmes
 - Hong Kong: Action Blue Sky



Expected Outcome

- Toronto: ecocity?
- Identify its shortcomings
- Suggest improvement measures
- Lesson for Hong Kong?
- Lesson for Toronto?

References

- The official City of Toronto website. (2007). *Living in Toronto portal*. Retrieved on 3 May, 2007, from the World Wide Web:
<http://www.toronto.ca/residents/index.htm>
- Earth Pledge. (2007). *Earth Pledge green roofs initiatives*. Retrieved 3 May, 2007, from the World Wide Web:
<http://www.earthpledge.org/GreenRoof.html>