



**Department of Marketing and Consumer Studies  
Real Estate and Housing**

**REAL\*4870  
SUSTAINABLE REAL ESTATE  
Fall 2019**

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**Instructor:** Dr. Paul Kraehling, OPPI CIP RPP (Ret.)  
Room: MINS 257  
Email: [pkraehli@uoguelph.ca](mailto:pkraehli@uoguelph.ca) (best way to reach me)  
Office Hours: Friday, 10 am – 11:30 am, or by appointment

**Class Times and Location:** Friday, 11:30 am – 2:20 pm  
Rozanski (Roz) 105 MacKinnon (MACK) Room 224

**Course Description and Objectives:**

The overall objective is for you to leave the class able to apply what you've learned to the current sustainability discussion and real estate investment market. This course is designed to give you an understanding of how topics in sustainability and climate change affect and are affected by real estate and community economics. Focus will be given to:

1. Understanding the reasons for and benefits of sustainability in real estate and planning
2. Identifying the commercial, residential, and governmental players in sustainable real estate and their roles
3. Developing a knowledge of the major green real estate certification programs worldwide
4. Examining the cause and effect of individual real estate decisions on cities in terms of density and sprawl
5. Evaluating historic, current, and proposed real estate sustainability solutions.

The structure of this course requires significant individual study and preparation outside of class. Each class session will cover major points and concepts contained in the readings as well as much material not covered in the readings (from documentaries, guest speakers, property tours); additionally, class discussion and debate will comprise a large portion of this course. Therefore, **thorough and consistent preparation and participation are necessary to succeed in this class.**

**Course Resources:**

**Required Texts**

Duany, A., Plater-Zyberk, E., and Speck, J., 2010. Suburban Nation: The Rise of Sprawl and the Decline of the American Dream. 10th Anniversary Edition

Owen, D. 2010. Green Metropolis: Why Living Smaller, Living Closer, and Driving Less are the Keys to Sustainability.

Speck, J., 2012. Walkability: How Downtown Can Save America, One Step at a Time.

Required readings from the books are outlined in the course schedule with an abbreviation nomenclature: (SN) – Duany et al.’s Suburban Nation; (GM) – Owen’s Green Metropolis; (WALK) – Speck’s Walkability book.

These books are available at any bookstore, or as ebooks, and may also be available ‘used.’ The books have also been placed on-reserve at the library.

### Other Resources

In addition to the required texts, the course also requires readings from a number of other sources and these sources have been placed on Courselink. The readings are associated with the abbreviations noted in the chart below and are required for the weeks noted in the Class Schedule and Key Dates table.

A	CaGBC (2015). “Canada Green Building Trends: Benefits Driving the New and Retrofit Market.”
B	Bond & Devine (2015). “Certification Matters: Is Green Talk Cheap Talk?”
C	Eichholtz, Kok & Quigley (2011). “Who Rents Green? Ecological Responsiveness and Corporate Real Estate.”
D	Devine & Kok (2015). “Green Certification and Building Performance: Implications for Tangibles and Intangibles.”
E	Condon (2004). “Canadian Cities American Cities: Our Differences Are the Same.”
F	Leinberger (2007). “Walking In Cities.”
G	Thompson (2013). “Suburban Sprawl: Exposing Hidden Costs, Identifying Innovations.”
H	Crane & Chatman (2003). “As Jobs Sprawl, Whither The Commute?”
I	Diamond & Thompson (2013). “The true costs of suburban sprawl.”
J	Gaffney (2013). “Widen Main St.? Community Had Other Ideas, and Thrived.”
K	Silver & Fischer-Baum (2015). “Public Transit Should Be Uber’s New Best Friend.”

### On-Line Communication:

- I will be communicating with you via your central email account <uoguelph.ca> from time to time. You are required to check this account on a regular basis. Please be advised that I will not edit my mailing list to your hotmail/yahoo etc. account.
- While I endeavour to check my email daily, students can reasonably expect a response from me within 48/72 hours.

### Method and Timing of Evaluation:

Your performance will be evaluated based on the following:

	Weight	Due Date
Participation	10%	On-going
Readings Quizzes	15%	On-going
Critical Book Reviews (2)	20%	Sept 27, Oct 25
Investor Certification Proposal	15%	Oct 11
Government Policy Debate	15%	Nov 8 - 22
City Sustainability Evaluation	25%	Nov 29

Keep a copy of all of your graded work until final marks have been recorded. You may be asked to resubmit your work at any time.

A percentage of the course grade is assigned to class participation. Participation involves active listening in class, engaging in discussion with questions to the professor and guests, and also attendance at all field trips, especially the one organized for Toronto. While attendance in class is not mandatory, it is hard to participate if you are not there.

Several reading quizzes will be held throughout the semester based on the weekly readings outlined in the course schedule. Out of the total number of quizzes held, all will be marked except the two that have the lowest grades during the semester.

Assignments are due according to the Course schedule. Written assignments are required to be deposited in the CourseLink <drop box> prior to class on the due date. Unless you have discussed an assignment extension well ahead of the due date, late penalties of 10%/earned grade/day (including weekends) will be assigned. Extensions will only be granted on the basis of extenuating circumstances.

If you are registered with the Centre for Students with Disabilities and will require some form of accommodation in the completion of the required learning activities for this course, please meet with me during the first week of class.

### **Course Philosophy and Approach:**

This is structured as a readings course, and the quality will depend largely on what each student puts into the class. One-third of the time will be in-class lectures from the professor. One-third will be learning from other third-party sources such as documentaries, guest speakers, and property tours. The last third will be interactive learning amongst the students, from class and small group discussions, debates, and presentations. The assignments will support this format, largely preparing the students for the interactive portion of the course. Do not mistake a lack of examinations for an easier course.

In this course, a third of the overall course mark is comprised of group work. The purpose of group interaction is to enable you to share ideas and to improve communication skills. Through interaction, you will discover for yourself the meaning of concepts, the subtleties inherent in everyday business situations, and the rationales for various solutions to managerial problems. To achieve effective interaction, the following is offered to promote success in this activity:

1) **Attendance.** Because interaction is central, and also because your fellow group members will be relying on you for ideas, your participation in group work and in-class presentations is expected. Valid reasons for absence include serious illness and family emergencies. Studying for exams and completing other assignments are not valid reasons to miss class;

2) **Preparation.** You are expected to read assigned material in advance and to be fully prepared for the group activity work. Unsupported opinion will not substitute for informed discussion. Adequate preparation is the only way to avoid embarrassment;

3) **Group dynamics.** As you are aware, working with others has both advantages and disadvantages. If challenges to working with your groupmates becomes evident, it is expected you attempt to address this with yourselves in a timely manner. Failing this, the instructor may be approached to address any unresolved problems.

**Course Schedule and Key Dates:**

<b>Class</b>	<b>Date</b>	<b>Topic</b>	<b>Pre-Class Activities/Readings</b>	<b>In-Class Activities &amp; Assessments</b>
1	Sept 6	<b>Introduction</b> <ul style="list-style-type: none"> <li>• Course Outline</li> <li>• Review student interests</li> </ul>		
2	Sept 13	<b>Why Green?</b>	GM, Ch 1 -3	
3	Sept 20	<b>What Green?</b>	GM, Ch 4 - 5	
4	Sept 27	<b>Green Building with Terra-View Developments (site visit to Hart Village)</b> David Brix, President	SN, Ch 1-3; A	GM Review
5	Oct 4	<b>Who Green? Commercial</b>	B; C; D	
6	Oct 11	<b>Who Green? Residential &amp; Government</b>	SN (all) – Ch 4 – 11	Investor Certification Proposals
7	Oct 18	<b>Toronto Tour (all day)</b>		
8	Oct 25	<b>Cities – Intro</b>	WALK, Pt I; E	SN Review
9	Nov 1	<b>Green Development Tour (site visit to ? Woodlands Preserve)</b> Jennifer Weatherston, Timberworx; Derek Satnik, S2E Technologies	WALK, Pt II Steps 1-4; F	
10	Nov 8	<b>Cities - Density</b>	G; H; I	Gov't Policy Debates I
11	Nov 15	<b>Cities - Sprawl</b>	WALK; J; K	Gov't Policy Debates II
12	Nov 22	<b>Cities – Solutions – Last Class Date</b>		Gov't Policy Debates III
	Nov 29	<b>No Class – assignment due on Friday, Nov 29<sup>th</sup></b>		City Sustainability Analysis

Note: The schedule of learning activities may require modification from time to time. Any changes will be announced in class and/or on the Courselink site.

## **Policies and Regulations**

All students are expected to abide by the University's academic regulations in the completion of their academic work, as set out in the undergraduate calendar (see <http://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/index.shtml>). Some regulations are highlighted in the following sub-sections.

### **Academic Misconduct:**

The University of Guelph is committed to upholding the highest standards of academic integrity and directs all members of the University community – faculty, staff and students – to be aware of what constitutes academic misconduct and to do as much as possible to prevent academic offences from occurring. The University of Guelph takes a serious view of academic misconduct and it is your responsibility as a student to be aware of and to abide by the University's policy. Included in the definition of academic misconduct are such activities as cheating on examinations, plagiarism, misrepresentation, and submitting the same material in two different courses.

To better understand your responsibilities, read the Undergraduate Calendar at:

<http://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/c08-amisconduct.shtml> You are also advised to make use of the resources available through the Learning Commons <https://www.lib.uoguelph.ca/get-assistance> and to discuss any questions you may have with your course instructor, Academic Advisor or Program Counselor.

Students should be aware that faculty have the right to use software to aid in the detection of plagiarism or copying and to examine students orally on submitted work. For students found guilty of academic misconduct, serious penalties, up to and including suspension or expulsion from the University can be imposed.

### **Academic Consideration:**

Students who find themselves unable to meet course requirements because of medical, psychological or compassionate circumstances beyond their control, should review the regulations on Academic Consideration in the Undergraduate Calendar ([http://www.uoguelph.ca/undergrad\\_calendar/c08/c08-ac.shtml](http://www.uoguelph.ca/undergrad_calendar/c08/c08-ac.shtml)) and discuss their situation with the instructor, Academic Advisor or Program Counsellor, as appropriate.

### **Religious Holidays:**

Should a student need to miss field trips, assignments or requirements to attend classes for religious reasons, please advise the instructor within two weeks of the distribution of this course outline so that alternate arrangements can be made. For further information see <http://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/c08-accomrelig.shtml>

### **University Grading Scheme:**

This course follows the University grading scheme outlined in the University Calendar. <https://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/c08-grds.shtml>

## Code of Conduct – The Top Ten

As a student in the Department of Marketing and Consumer Studies Guelph, you are a member of a scholarly community committed to improving the effectiveness of people and organizations, and the societies in which they reside, through ground-breaking and engaging scholarship and pedagogy. We seek to promote a comprehensive, critical and strategic understanding of organizations, including the complex interrelationship between leadership, systems (financial and human) and the broader social and political context. And, we prepare graduates for leadership roles in which organizational objectives, self-awareness, social responsibility and sustainability are primary considerations.

In keeping with this commitment, we expect all of our students (indeed – all members of our community) to act in a professional and respectful manner to fellow students, staff and faculty, as well as to members of the broader university and local community. This expectation is very much in keeping with your preparation for a professional career.

The following conduct is expected of all our students:

1. Come to class prepared to learn and actively participate (having completed assigned readings, learning activities etc.).
2. Approach your academic work with integrity (avoid all forms of academic misconduct).
3. Arrive on time and stay for the entire class. If you happen to be late, enter the classroom as quietly as possible. At the end of class, apologize to the faculty member for the interruption. If you have to leave class early, alert the faculty member in advance.
4. If you know in advance that you are going to miss a class, send an email to the faculty member letting him/her know that you will be absent, with a brief explanation.
5. While in class, refrain from using any written material (e.g., newspaper) or technology (e.g., the Internet, computer games, cell phone) that is not relevant to the learning activities of that class. Turn off your cell phone at the start of each class.
6. Listen attentively and respectfully to the points of view of your peers and the faculty member. Don't talk while others have the floor.
7. Raise your hand when you wish to contribute and wait to be called upon. Challenge others appropriately, drawing on reason and research rather than unsubstantiated opinion, anecdote and/or emotion. Keep an open mind and be prepared to have your point of view challenged.
8. When sending emails to faculty, apply principles of business writing; use a professional and respectful style (use a formal salutation, check for spelling and grammatical errors, and avoid slang and colloquial short forms).
9. When making a presentation or on a fieldtrip, wear business casual attire.
10. Provide thoughtful feedback at the completion of all courses (we are committed to continuous improvement but need your input to help us decide what to focus on).

## ASSIGNMENTS:

### **Critical Book Reviews Assignments (two – GM & SN)**

These reviews should be no longer than 2 pages (Arial/Calibri 11-point font, double spacing with 1" margins), and structured as follows:

- **Opening:** summarize the main point of the author. (Establish empathy with the author so you can understand the author's purpose in writing the book.)
- **Body:** comment on supporting, contradicting, and missing evidence.
- **Conclusion:** restate the author's main idea and determine if the evidence presented in the book is strong enough to support the author's main point.

Note: this assignment is a CRITICAL book review, which is a very different assignment from a book review. The goal of a critical book review is to evaluate and explain what you thought of the book's effectiveness, not to simply summarize the book. There are often first-person statements in a critical book review (in this instance I found the author's story. . . I have trouble accepting... given the evidence provided, I concur with the author point of view because...). 'Critical' does not mean you need to find fault in the book – simply that you have just critically evaluated it, rather than accepted the story it tells.

### **Investor Certification Proposal Assignment**

This assignment will extend your knowledge of real estate certification programs and help you put it into the real estate investment context. The assignment takes the form of an RFP. In each scenario (see the following page), an investor (the Professor) is considering two certification-related options for their property. Student groups will serve as consultants, presenting why the investor should select their proposal. While this format will put the two certification options in head-to-head competition, it should be considered that the presentation's tone matters here as much as the facts: carefully manage the amount of effort spent supporting the strengths of your own proposal and the weaknesses of your competitor's proposal (mud-slinging must be done in a refined way, to not alienate your possible investor).

Students will form their own teams of 5 - 6 members each and email the Professor with the names of the team members. The scenarios will be assigned in-class, and while efforts will be made to match students with the desired scenarios, there is no guarantee that you will be assigned your preferred scenario.

Each student team will be assigned to recommend one of the eight certification positions described below. Proposals to the investor will be given in-class in two parts: a 15-minute oral presentation by the group to the investor (and rest of the class), and a written report; the group should be prepared to answer questions from the investor, and possibly the class. Both the oral and written report are due in-class on that day; the oral and written presentations are worth 5% and 10% of your final grade, respectively.

The proposals should educate the investor on the details of your suggested action. This includes a description of the program's history and successes, market penetration, and why it is a good fit for the investor's upcoming activity. A good way to attack the assignment might be a SWOT approach, so that you actively ID your strengths and your competitors' weaknesses and speak well to both. Remember, this is a sales pitch. The report should be 8 – 10 pages of text (Arial/Calibri 11-point font, double

spaced with 1" margins) PLUS pictures, charts, graphs, maps, and projections, as required. Number the pages in your report and label/reference all exhibits carefully.

In completing the assignment, group members may decide to divide the work completion relative to the strengths of the individual members. . . some better at presenting, and others better at writing. For marking purposes, grades will be assigned by individual group for the presentation and report preparation portions.

The four scenarios (with two student teams assigned to each, with one team for each option) are the following:

Scenario A: Special Use, To Certify (Yes) or not to Certify (No)

Ten Lives Club is a humane society for animals, encouraging spay/neuter programs to control unwanted animal populations, helping place pets in loving homes while operating under a no-kill policy, and promoting the animal-human bond through outreach, education, and therapeutic programming. The organization has been meeting these goals since 1943, and having outgrown their current home, is about to construct a new facility. This facility will be situated in the outskirts of Burlington, ON in a 30,000 SF building situated on 4.4 acres of land. The facility will be comprised of creative kennelling for homeless pets, a veterinary clinic, a classroom, pet therapy suites, a resource library, and other specialized uses. The organization would like to incorporate green features into their construction process. However, they are unsure whether or not they will pursue certification given their non-profit budget and highly specialized property type. (Note: the student group recommending certification may select a program of their choice to endorse).

Scenario B: New Construction, LEED vs. BREEAM

Troi Properties has plans to develop a new (infill) 52-story mixed use property in a midtown section of Old Toronto. The building will have first and second floor retail (16,000 SF), office space on floors 3-20 (150,000 SF), and rental apartments on floors 21-52 (202 units, studios through 4bedroom penthouses); all space will be leased at market rates. The company is considering LEED and BREEAM certification for this new construction project.

Scenario C: Existing Buildings: Operations & Management, LEED vs. BOMA BEST (Green Globes)

Stewart Products is a privately held, family-managed company that produces components used in PVR boxes and graphics cards. The firm's global headquarters, situated in Pickering, ON, is a 2-story mixed-use facility constructed in 2002. The building floor area is 66,000 SF, of which 70% is office and 30% is research and manufacturing space. Due to the Stewart family's commitment to sustainability, the building was designed and constructed using green-building principles, including high-energy efficiency technology, extensive use of natural lighting, and individual control of workspace environments. The company is considering an on-going commitment to green operations and management certification program – either through LEED or BOMA BEST.

Scenario D: New Home Construction, Energy Star Certification vs Net Zero Ready

Green Home Builders (Guelph) is wanting to distinguish itself from the other local home builders in the community as a green sustainability advocate. This distinction is to be set in a manner that encourages new potential customers within a Guelph setting. As the home-building industry is a competitive environment, both within the local context but also regionally, the advancement of a particular building program needs to be done with cost-consciousness as an important consideration. While there are many green certification and development systems available, the builder has narrowed the field to just two – Energy Star vs Net Zero Ready.



## **Government Policy Debate Assignment**

Student groups comprising 4 members each will each debate one side of a proposed green-related policy. The topics and affirmative/negative positions will be assigned in class. While efforts will be made to match students with the desired scenarios, there is no guarantee that you will be assigned your preferred topic or position. This assignment provides students an opportunity to demonstrate their understanding of class concepts and readings, practice discussing issues in a respectful and effective manner, and expand their critical thinking skills.

Student groups should divide up the tasks of presenting underlying issues, the support position, the opposition, and any alternative policies/positions that could arise. Each team member must speak at least once in the debate, and each speaking opportunity must be presented by one team member only (see Format description below for more information).

This assignment is evaluated completely based on the debate presented in class; there is no submittable report associated with this assignment. **This means that you will have less than 10 minutes total, per person, to earn 15% of your grade. Preparation will be KEY for this assignment.** The debate is evaluated in terms of clarity, use of supporting evidence, effective rebuttals, and overall preparedness. The winner of each debate (which will be determined by the professor, with input from the class) need not represent the concept which may seem a better choice based on our classwork, but rather the team that does a better job of presenting and defending their position. Not winning the debate does not necessarily indicate a poor grade on the debate. However, winning the debate will result in additional marks on the assignment.

### **Style: Formal Debate**

### **House Rules: No Grace Periods, No Interruptions, No Heckling, No Visual Aids**

#### **Format:**

- The first speaker on the affirmative team presents arguments in support of the resolution. (5 – 7 minutes)
- The first speaker on the opposing team presents arguments opposing the resolution. (5 – 7 minutes)
- The second speaker on the affirmative team presents further arguments in support of the resolution, identifies areas of conflict, and answers questions that may have been raised by the opposition speaker. (3 – 5 minutes)
- The second speaker on the opposing team presents further arguments against the resolution, identifies further areas of conflict, and answers questions that may have been raised by the previous affirmative speaker. (3 – 5 minutes)
- A short recess is held for teams to prepare their rebuttals. (5 minutes)
- The third person on the opposing team begins with the rebuttal, attempting to defend the opposing arguments and to defeat the supporting arguments without adding any new information. (3 – 5 minutes)
- The third person on the affirmative team provides a rebuttal to the comments of the opposition team. (3 – 5 minutes)
- The final members of each team provide final closing statements; a member from the affirmative team has the last opportunity to speak. (3 – 5 minutes each)

**Guidelines to help you prepare for a debate:** <http://www.sfu.ca/cmns/130d1/HOWTODEBATE.htm>

Scenarios which may be debated are:

Scenario A – Should a Mississauga Green Building Incentive Program be Established? Yes or No  
The City of Mississauga is considering adopting a Pilot Green Building Incentive Program using the

standards established by the LEED Green Building Rating System. The program would grant bonus densities and/or heights to building projects which received LEED certification. The threshold for consideration of the density and height bonuses includes the full range of LEED certifications (Certified, Silver, Gold and Platinum). Achieving the LEED Certified level does not guarantee a density bonus but will be considered on a case-by-case basis and can potentially earn a bonus of .05 floor area ratio (FAR) for office buildings (.10 FAR for residential). Office buildings achieving LEED Silver can be eligible for up to .15 FAR (residential .20 FAR). Office buildings achieving LEED Gold can be considered for .35FAR (residential .40 FAR) and office buildings achieving LEED Platinum can be considered for .45 FAR (residential .50 FAR). Retail and industrial buildings are not eligible for this program, but mixed-use buildings with a dominant office and/or residential use are eligible.

Scenario B – Should a City of Toronto Congestion Pricing Plan be Established? Yes or No

In an effort to decrease emissions and traffic while increasing walkability, pedestrian safety, and desirability of the City's core, the City of Toronto is considering a Congestion Pricing Law. The policy would implement a flat \$5 charge for motorists driving in central Toronto on weekdays between 7:00 am and 6:30 pm. There would be exemptions for motorcycles, licensed taxis, vehicles used by disabled people, some alternative fuel vehicles, buses and emergency vehicles. Area residents would receive a 90% discount on annual passes. The charging area would be indicated by roadside signs and symbols on the roadway.

Scenario C – Should Increased Densification within the Toronto-Centred Region Occur? Yes or No

The Places to Grow Plan (2017) encourages increased density levels of employment/population within the Toronto-centred region; these increased levels of activity are intended to provide a better 'complete' community. While some argue that increasing densities will make the area more liveable, others argue these levels of densification will make life unbearable in terms of affordability and movement congestion. Argue your perspective as to what makes a more sustainable and resilient community for the future – a higher density urban core one, or one with more development in fringe undeveloped areas?

Scenario D – Does Guelph reflect the 'best' of being a Sustainable Community? Yes or No

The City of Guelph likes to market itself as an environmentally-conscious community to itself and the outside world. The City has created many initiatives in various strategies and plans that promote sustainability as defined in this course, e.g., Guelph Community Energy Initiative, 2018 Official Plan. The City has instituted many green features associated with attempting to reduce its overall carbon footprint and becoming more resilient to the impacts of climate change. Is Guelph on the correct path to being/becoming a sustainable community?

Scenario E – Is there Sufficient Available Land Supply in the Toronto-centred Region to Build Affordable/Appropriate Housing? Yes or No

A sustainable city has adequate space within it to provide for the housing needs of all. Often, housing for lower income households is difficult to come by. Within the Toronto-centred region, there is much debate amongst government officials, academics, civil society advocates and low cost housing users as the best approach to provide affordable housing in a dense and growing urban metropolis. Many different strategies, position papers and plans exist to address this issue. Some argue that the best way to provide for this type of housing is to build on the 'cheapest' lands, often found in suburban locations – on so-called 'underutilized or vacant land'. Others argue that there are many under-performing lands found in existing built-up areas of the City – brownfield/greyfield lands, vacant/underutilized space. Are sufficient development lands available to address the need?

Scenario F (if needed, based on class #) – Is Vancouver the 'Most' Green City in Canada? Yes or No

The City of Vancouver is a very desirable place to live – in proximity to an oceanside locale and having

grandiose mountainscapes in its proximity. The City has a strong urbane character with high density housing, a diverse economy, multiple transport options, and accessibility to nearby amenities (world-class recreation facilities). While having many characteristics as a desirable place to live, work and play, the City by its unique waterfront location is also susceptible to potential significant impacts caused by climate change. The City Council has declared it wants to be the world's greenest community by 2020, and consequently the greenest city in Canada. The declaration and follow-up actions are outlined in their sustainability plan entitled 'Greenest City 2020 Action Plan.' This Plan addresses many of the topics explored in this course but are the City's ambitions more hype than real?

### **City Sustainability Analysis Assignment**

A sustainable city is designed with consideration given to environmental impact. It is inhabited by people dedicated to minimizing their use of finite resources and waste and emission creation. It should meet the needs of the present occupants without sacrificing the right of the future occupants to meet their own needs. Throughout this class we've heard example of cities from around the world. Good examples (Portland, OR; Masdar, UAE; Singapore), poor examples (cancer villages, China; Atlanta, GA; Phoenix, AR), and developing examples (Mumbai, India; Beijing, China). For this assignment, each student will complete an analysis of the sustainability of a southern Ontario community.

Given the breadth of the concept, each student has great latitude in the completion of this assignment. Some things to consider are:

- Does the community have renewable energy sources? What percent of the power for the city comes from those sources? How are those sources being developed?
- How large an ecological footprint does the city produce? How much pollution and waste is the city creating?
- **What urban planning techniques are currently in place to encourage sustainable building construction? What public/mass transit options are currently available or in planning stages?**
- **How are density and sprawl being propagated and managed in the city?**
- What policies has the local government(s) enacted to encourage sustainability? **Where can the city spend the least and make the most difference (geographically, Walkability steps, etc.)**
- Are there private sector leaders in the city encouraging sustainability?

This is about analysis, not just reporting. I don't want a parroting of the community's sustainability plan. However, I am happy to hear an evaluation of it. Focus on the **bolded** topics is highly suggested, and evaluation through the *Walkability* book lens **is required**; other areas of analysis may be determined based on the nature of the chosen community. Many case studies of sustainable cities are available online – reading some of these studies may assist you in preparing your own analysis.

Each student will INDIVIDUALLY complete this analysis for one community. If necessary, there will be a limit set to the number of students that may want to choose a particular community. The report should be 8-10 pages of text (Arial/Calibri 11-point font, double spaced with 1" margins) PLUS pictures, charts, graphs, maps, and projections, as required. Number the pages in your report and label/reference all exhibits carefully.

The cities will be assigned in-class, and while efforts will be made to match students with the desired cities, there is no guarantee that you will be assigned your preferred scenario.

1	Ajax
2	Aurora
3	Barrie
4	Belleville
5	Bowmanville
6	Brampton
7	Brantford
8	Burlington
9	Caledon
10	Cambridge
11	Chatham-Kent
12	Cobourg
13	Cornwall
14	East Gwillimbury
15	Georgian
16	Grimsby
17	Halton Hills
18	Hamilton
19	Innisfil
20	Kawartha Lakes
21	Kingston
22	Kitchener
23	London
24	Midland
25	Milton

26	Mississauga
27	New Tecumseth
28	Newmarket
29	Niagara Falls
30	Oakville
31	Orangeville
32	Orillia
33	Oshawa
34	Other?
35	Owen Sound
36	Peterborough
37	Pickering
38	Richmond Hill
39	Sarnia
40	St. Catharines
41	Stratford
42	Trenton
43	Uxbridge
44	Vaughan
45	Waterloo
46	Welland
47	Whitby
48	Whitchurch-Stouffville
49	Windsor
50	Woodstock