



## Integrated Columbus Part II Planning Act and Municipal Class Environmental Assessment Act Study

# Sustainable Development Report

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# Part 1: Best Practices in Sustainable Neighbourhood Development

## 1.1 What is Sustainable Neighbourhood Development?

Sustainable Development is generally defined as development that meets the needs of the present without compromising the ability of future generations to meet their own needs. This definition is taken from the United Nations World Commission on Environment and Development (W.C.E.D.), which was established in 1983 with the intention of uniting countries together to pursue environmental strategies that support long-term economic growth at a global scale. It is also reflected in a report named “Our Common Future” (also known as The Brundtland Report) prepared on behalf of the Commission. The Brundtland Report’s definition of sustainable development and its various components is now the most widely cited definition of the concept.

The Brundtland Report further explains that sustainability is reliant on the interdependence of three spheres: social development, economic growth, and environmental protection. In planning our built environment for the future, all three of these factors must be taken into consideration for a project to be sustainable.

## **1.2 Programs and Metrics for Sustainable Neighbourhood Development**

The definition of sustainability and its three domains provide ample room for interpretation by various city builders. As such, a number of metrics and performance indicators have been developed to allow sustainability efforts to be quantified. These frameworks are typically used by developers at the stage of site planning, development, and approvals processes to demonstrate commitment to sustainability, rather than by municipalities. The principles and guidelines within the frameworks, however, provide insight towards current thinking in sustainable neighbourhood development.

The following outlines three programs that are commonly used by community developments to achieve sustainability standards.

### **1.2.1 L.E.E.D. Neighbourhood Development Standards**

L.E.E.D. stands for Leadership in Energy and Environmental Design, and is a program administered by the U.S. Green Building Council (USGBC) and the Canadian Green Building Council (CaGBC). L.E.E.D. originally began as a program to evaluate and certify 'green' buildings across North America. The L.E.E.D. Neighbourhood Development Standards (L.E.E.D.-ND) moves past individual buildings and applies the L.E.E.D. system at the neighbourhood scale. The L.E.E.D. methodology utilizes a score-card or rating type system, where projects can gain a certain number of credits in order to obtain various levels of accreditation. In addition to these credits, a project must meet a number of prerequisite criteria in order to gain any L.E.E.D.-ND certification. The rating system is organized into the following three categories: Smart Location and Linkage; Neighbourhood Pattern and Design; and Green Infrastructure and Buildings.

Smart Location and Linkage criteria revolve around where the neighbourhood is being built. The criteria encourages intensification primarily in areas such as downtowns including re-development of previously developed, infill, and brownfield sites in order to use land efficiently and preserve open space. A number of prerequisites within this category involve locating development in a way that is sensitive to existing environmental features such as wetlands, ecological communities, and floodplains.

Neighbourhood Pattern and Design criteria encourage compact urban land development with a range of land uses and diverse housing types. These criteria allow communities to support diverse populations while encouraging economic diversity and potentially reducing commute times. Walkable streets, as well as a connected and open community are also prerequisites for effective pedestrian and transit oriented communities.

Green Infrastructure and Buildings criteria focus on the implementation of green building

principles within the built environment. The criteria places emphasis on energy efficiency, water efficiency, the adaptive re-use of older buildings, managing stormwater runoff, reducing and eliminating pollution sources, and recycling materials.

L.E.E.D. ND certified projects in Ontario include Preston Meadows in Cambridge, and the Rebecca Street redevelopment in Oakville.



**LEED v4 for Neighborhood Development Plan Project Checklist**

Project Name:  
Date:

Yes	?	No			
0	0	0	<b>Smart Location &amp; Linkage</b>		<b>28</b>
Y			Prereq	Smart Location	Required
Y			Prereq	Imperiled Species and Ecological Communities	Required
Y			Prereq	Wetland and Water Body Conservation	Required
Y			Prereq	Agricultural Land Conservation	Required
Y			Prereq	Floodplain Avoidance	Required
			Credit	Preferred Locations	10
			Credit	Brownfield Remediation	2
			Credit	Access to Quality Transit	7
			Credit	Bicycle Facilities	2
			Credit	Housing and Jobs Proximity	3
			Credit	Steep Slope Protection	1
			Credit	Site Design for Habitat or Wetland and Water Body Conservation	1
			Credit	Restoration of Habitat or Wetlands and Water Bodies	1
			Credit	Long-Term Conservation Management of Habitat or Wetlands and Water Bodies	1
0	0	0	<b>Neighborhood Pattern &amp; Design</b>		<b>41</b>
Y			Prereq	Walkable Streets	Required
Y			Prereq	Compact Development	Required
Y			Prereq	Connected and Open Community	Required
			Credit	Walkable Streets	9
			Credit	Compact Development	6
			Credit	Mixed-Use Neighborhoods	4
			Credit	Housing Types and Affordability	7
			Credit	Reduced Parking Footprint	1
			Credit	Connected and Open Community	2
			Credit	Transit Facilities	1
			Credit	Transportation Demand Management	2
			Credit	Access to Civic & Public Space	1
			Credit	Access to Recreation Facilities	1
			Credit	Visitability and Universal Design	1
			Credit	Community Outreach and Involvement	2
			Credit	Local Food Production	1
			Credit	Tree-Lined and Shaded Streetscapes	2
			Credit	Neighborhood Schools	1

Yes	?	No			
0	0	0	<b>Green Infrastructure &amp; Buildings</b>		<b>31</b>
Y			Prereq	Certified Green Building	Required
Y			Prereq	Minimum Building Energy Performance	Required
Y			Prereq	Indoor Water Use Reduction	Required
Y			Prereq	Construction Activity Pollution Prevention	Required
			Credit	Certified Green Buildings	5
			Credit	Optimize Building Energy Performance	2
			Credit	Indoor Water Use Reduction	1
			Credit	Outdoor Water Use Reduction	2
			Credit	Building Reuse	1
			Credit	Historic Resource Preservation and Adaptive Reuse	2
			Credit	Minimized Site Disturbance	1
			Credit	Rainwater Management	4
			Credit	Heat Island Reduction	1
			Credit	Solar Orientation	1
			Credit	Renewable Energy Production	3
			Credit	District Heating and Cooling	2
			Credit	Infrastructure Energy Efficiency	1
			Credit	Wastewater Management	2
			Credit	Recycled and Reused Infrastructure	1
			Credit	Solid Waste Management	1
			Credit	Light Pollution Reduction	1
0	0	0	<b>Innovation &amp; Design Process</b>		<b>6</b>
			Credit	Innovation	5
			Credit	LEED® Accredited Professional	1
0	0	0	<b>Regional Priority Credits</b>		<b>4</b>
			Credit	Regional Priority Credit: Region Defined	1
			Credit	Regional Priority Credit: Region Defined	1
			Credit	Regional Priority Credit: Region Defined	1
			Credit	Regional Priority Credit: Region Defined	1
0	0	0	<b>PROJECT TOTALS (Certification estimates)</b>		<b>110</b>

Certified: 40-49 points, Silver: 50-59 points, Gold: 60-79 points, Platinum: 80+ points

Project Checklist for L.E.E.D. v4 for Neighbourhood Development Plan (source: L.E.E.D.)

									
<b>Health and happiness</b>		Encouraging active, social, meaningful lives to promote good health and wellbeing							
<b>Equity and local economy</b>		Creating safe, equitable places to live and work which support local prosperity and international fair trade							
<b>Culture and community</b>		Nurturing local identity and heritage, empowering communities and promoting a culture of sustainable living							
<b>Land and nature</b>		Protecting and restoring land for the benefit of people and wildlife							
<b>Sustainable water</b>		Using water efficiently, protecting local water resources and reducing flooding and drought							
<b>Local and sustainable food</b>		Promoting sustainable humane farming and healthy diets high in local, seasonal organic food and vegetable protein							
<b>Travel and transport</b>		Reducing the need to travel, encouraging walking, cycling and low carbon transport							
<b>Materials and products</b>		Using materials from sustainable sources and promoting products which help people reduce consumption.							
<b>Zero waste</b>		Reducing consumption, re-using and recycling to achieve zero waste and zero pollution							
<b>Zero carbon energy</b>		Making buildings and manufacturing energy efficient and supplying all energy with renewables							

*The One Planet Living Principles (source: One Planet Living)*



## 1.2.2 One Planet Living

One Planet Living is a planning and sustainability framework created by Bioregional, an entrepreneurial charity. One Planet Living is a tool that can be applied to businesses and organizations as well as to developments, plans, and individual buildings. The main output of the One Planet Living process is a One Planet Action Plan that is used to guide projects.

Action Plans can be created based on evaluation of the planning context, project goals and visions and stakeholder workshops. Goals of the Action Plans are typically based upon the ten One Planet Living Principles. These include:

- Health and happiness;
- Equity and local economy;
- Culture and community;
- Land and nature;
- Sustainable water;
- Local and sustainable food;
- Travel and transport;
- Materials and products;
- Zero waste; and
- Zero carbon energy.

Once the Action Plan is created, organizations are expected to submit the document to Bioregional for peer review and to implement the plan, monitor it, and report on its progress.

Bioregional utilizes seven criteria for assessing Action Plans. Criteria categories include:

- Workshop Context: What Actions have been identified as having the greatest impact and what sphere of influence do these Actions have on surrounding ecosystems?
- Workshop Vision: To what extent does the Action Plan have ambitious outcomes in line with One Planet Goals?
- Plan: Comprehensiveness; Clarity; and Coherence of the Action Plan.
- Monitor: Delivery, including targets, timescales, and implementation.
- Organizational appraisal: Readiness, commitment, resources, and record tracking of the Action Plan.
- Overview statement: Does the Action Plan generally conform to One Planet Goals?
- References: What is the supporting evidence for the Action Plan?

One Planet Living is being implemented in Ontario in developments such as Port Credit West Village in Mississauga, LeBreton Flats in Ottawa, and The Baker District in downtown Guelph.

### 1.2.3 EcoDistricts Protocol

The EcoDistricts Protocol is a performance standard for district-scale sustainable development and redevelopment of urban areas. Certification is provided by EcoDistricts, a non-profit organization focusing on promoting district-scale sustainable development best practices. EcoDistricts has created a list of indicators for sustainable development at the district-scale that is used in combination with their Protocol certification. The Protocol is unique because it is rooted in process driven change with an emphasis on ensuring a meaningful collaborative process with stakeholders.

To achieve the goals of the Protocol, EcoDistricts has established three core elements including:

- Three Imperatives: Equity, Resilience, and Climate Protection;
- Six Priorities: Place, Prosperity, Health and Wellbeing, Connectivity, Living Infrastructure, and Resource Regeneration; and
- Three Implementation Phases: Formation, Roadmap, and Performance.

There are four stages or action areas within the EcoDistricts Protocol. The Imperatives Commitment stage begins the process, confirming the district's commitments to the Three Imperatives of Equity, Resilience, and Climate Protection. This typically involves defining a vision for the project that includes the three imperatives.

Stakeholders are actively involved throughout the EcoDistricts process to ensure self-governance and self-reliance. In the Formation stage stakeholder engagement and local governance are emphasized to ensure change is locally initiated and the scope of sustainable development does not exceed the district's organizational capacity.

In the Roadmap stage, stakeholders establish an action plan that evaluates the context and sets priorities, performance indicators, and targets. Two types of indicators are listed under the Protocol. First are Imperative Indicators which includes 26 indicators relating to equity, resilience, and climate protection. Second are Priority Indicators which include 20 Objective Categories. Objective Categories include sub-objectives which are achieved through individual Illustrative Indicators. For both indicator types, stakeholders are only required to select a specified number of indicators from each category.

In the Performance stage, indicators are tracked and reported, and opportunities for improvements are monitored. Submission of progress reports are required on the second anniversary of certification and every two years thereafter to maintain certification.

The East Harbour development in east downtown Toronto is planned to be Canada's first EcoDistrict.

## 1.3 Summary

The protocol and metrics described in previous sections show the variety of ways sustainability can be evaluated and quantified within neighbourhood development. These frameworks are typically used by developers at the stage of site planning, development, and approvals processes to demonstrate commitment to sustainability, rather than by municipalities. The principles and guidelines within the frameworks, however, provide insight towards current thinking in sustainable neighbourhood development.

Within municipal planning, Sustainable Development Guidelines and Sustainable Development Principles are typically created to guide planning and urban design decisions around sustainability and climate change. These documents allow municipalities to create context-specific guidance that meets existing planning objectives.

The next section of the report contains a number of guiding principles that are proposed for consideration to direct urban design and planning decision making for the Columbus Part II Planning Area.



## Part 2: Principles for Sustainable Neighbourhood Development

A number of principles can be gleaned from the programs and metrics described in the previous section. This section describes these principles, their benefits, and how they are implemented through urban design measures. The principles are contained within the following categories:

- Mobility and Connectivity;
- Built Environment;
- Natural Systems; and
- Community Integration.

The principles are proposed for consideration to provide guidance for future urban development within the Columbus Part II Planning Area.

## 2.1 Mobility and Connectivity

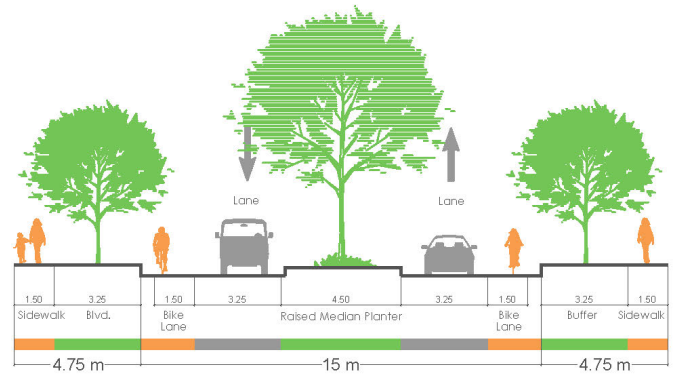
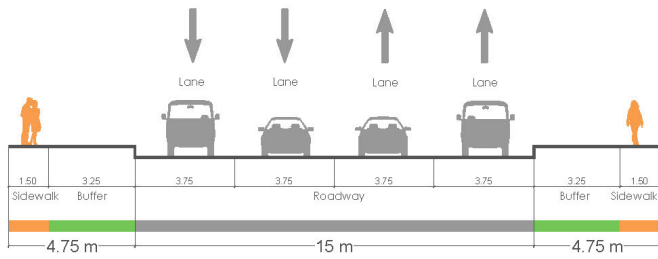
A well connected urban environment that supports a multi-modal transportation system which prioritizes pedestrian activity contributes to the social and environmental health of a community.

Climate change is caused by the increase of greenhouse gases (G.H.G) in our atmosphere. In Canada, emissions of G.H.G.'s from transport related activities contribute approximately 199 mega-tonnes of carbon dioxide to the atmosphere. This amounts to more than one quarter of Canada's overall G.H.G. emissions, the majority of which come from personal vehicles and heavy duty transport such as shipping vehicles. Development that encourages walking, cycling, and transit infrastructure provides opportunities for communities to reduce the greenhouse gases emitted by personal vehicles.

Well connected communities can also help improve individual health by encouraging walking and cycling. Additionally, walking and cycling provide equitable, inexpensive and simple ways for city residents to travel between destinations or transit options.

Urban design can assist in encouraging walking and cycling through the following tools:

- Walkable, Vibrant Streets
- Well Connected Street Networks
- Access to Transit
- Bicycle Friendly Design (Active Transportation Networks)



*Davenport Road in Waterloo was updated to accommodate pedestrian and cycle facilities. These sections demonstrate the street before and after improvements (Source: Complete Street Transformations, Clean Air Partnership)*

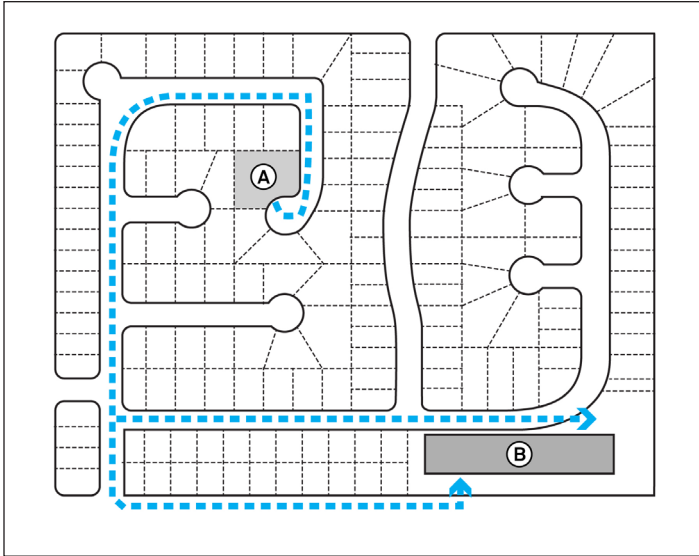
### 2.1.1 Walkable, Vibrant Streets

Walkable streets ensure people are connected to the places they want to go. In many instances, walkability has been tied to statistically improved economic benefits and an improved sense of place that fosters social interaction and community identity. Moreover, walkable streets promote not only walking, but cycling and the use of public transit. As our climate changes and temperatures increase, the shade provided by street trees will be an important factor in fostering comfortable urban microclimates and reducing the urban heat island effect.

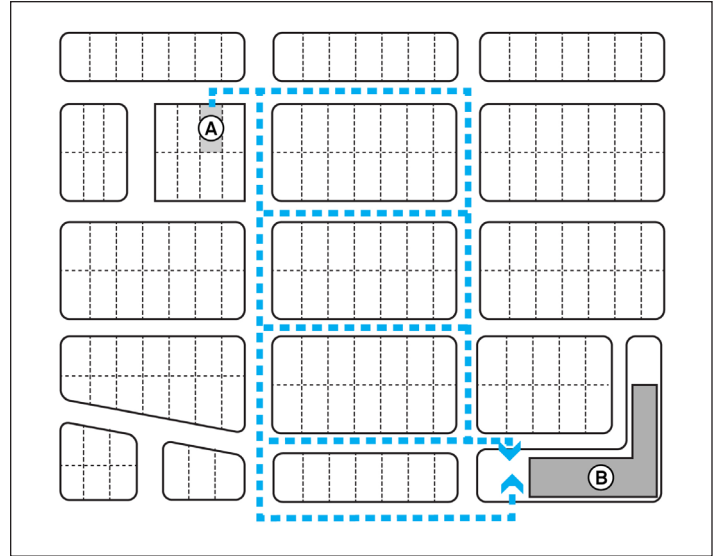
Policy direction related to block size and right-of-way widths are tools that can be used at the Secondary Plan level to help promote a well connected neighbourhood. This can include direction with respect to the use of alternative roadway standards to encourage narrower and fewer vehicular lanes, active transportation, and transit use. Urban Design Guidelines often provide recommendations regarding street widths, frontages, furnishings, and tree plantings that work together to create a pleasant and more vibrant streetscape.



*Davenport Road, after improvements (Source: GSP Group)*



Fewer Intersections - longer travel



More Intersections - shorter travel

This diagram demonstrates ease and distance of travel relative to intersection quantity and street and block layout. (Source: Brook McIlroy, adapted from Kinley Horne)

### 2.1.2 Well Connected Street Networks

A system of interconnected streets, laneways, and paths help increase transportation efficiency and encourage walking and physical fitness. Additionally, a well connected street network helps reduce the volume of traffic and traffic delays on major streets.

A hierarchy of street types including arterial, collector, and local roads help implement a well connected street network. In addition, encouraging a high street intersection density, helps achieve a more walkable neighbourhood. Traditional grid patterns are often the most efficient way of achieving a well connected network, however street networks should also take into consideration topography and natural heritage areas.

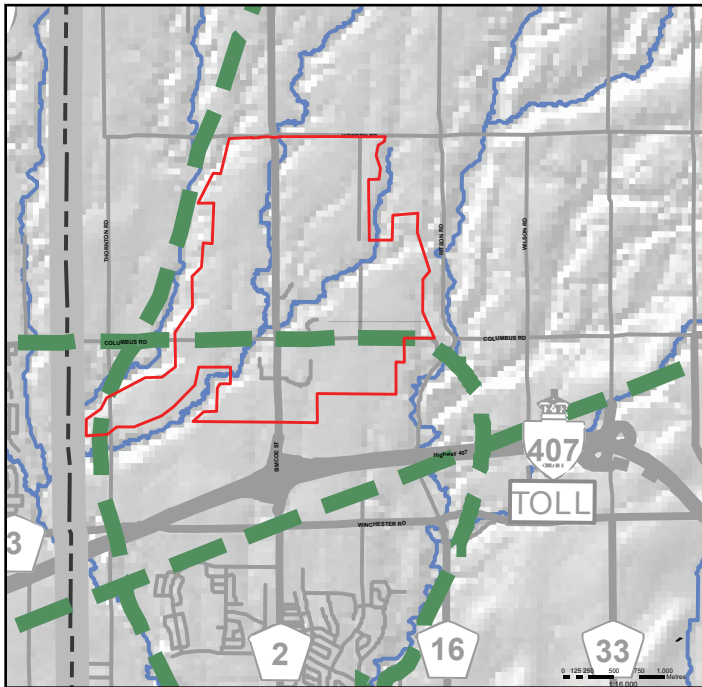
### 2.1.3 Access to Transit

Public transit helps improve air quality, reduce G.H.G. emissions, and save energy by reducing overall single vehicle use. Improving access to transit is achieved by increasing the number of transit routes, improving accessibility to transit stops, and by locating higher density development in proximity to transit hubs and corridors. The latter practice of locating jobs, housing and retail in close proximity to transit is known as transit-oriented development.

Many municipalities encourage higher density and mixed use land uses adjacent to major transit stops or mobility hubs.

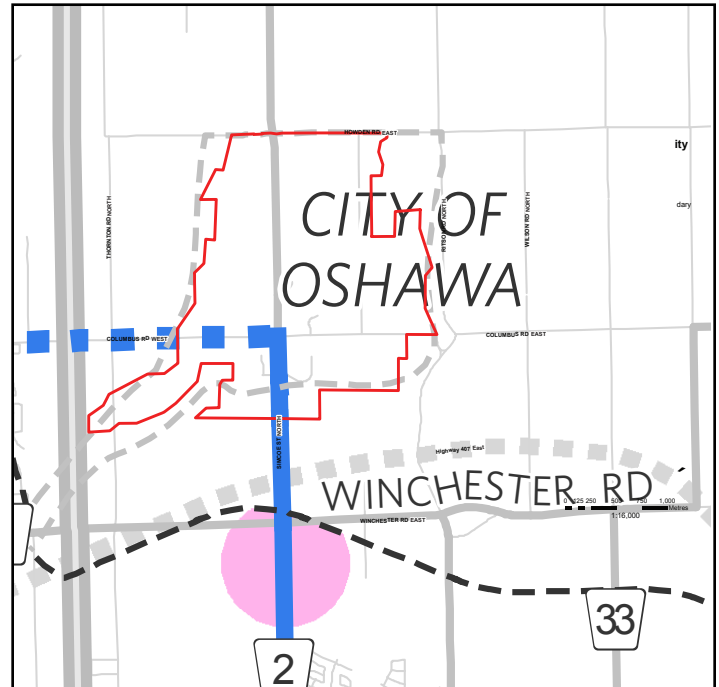


Durham Regional Trail Network Map



- — — Proposed Linkage
- — — Columbus Part II Planning Area

Region of Durham Regional Cycling Plan Primary Cycling Network Map



- — — Regional Primary Cycling Network
- — — Proposed Local Primary Cycling Network
- — — Highway 407
- — — City of Oshawa Boundary
- - - - Urban Area Boundary
- - - - Urban Area Boundary (Deferred)
- — — Columbus Part II Planning Area

### 2.1.4 Active Transportation Networks

Active transportation networks support physical forms of transportation including walking and cycling. Active transportation provides social, environmental, and economic benefits. For example, encouraging walking and cycling can assist in reducing greenhouse gas emissions and increase physical fitness. One method of promoting active transportation is the development of new cycling infrastructure.

New cycling infrastructure is constructed in a variety of different ways to suit its context. Networks typically link together a variety of different sidewalk and path types that suit their context. For instance, municipal cycle paths on and adjacent to roadways may link up to municipal, regional and provincial trail networks that are adjacent to natural heritage areas.

The Region of Durham published a Regional Cycling Plan in November 2012, which proposes a Primary Cycle Network. Additionally, Regional Council created the Durham Active Transportation Committee (D.A.T.C.) to advise the Region on active transportation matters. The D.A.T.C. has published a Regional Trail Network Map that shows long range trail planning and development.

## 2.2 Built Environment

The way we build communities impacts our lives in a number of ways. Where people work and go to school, how they get around, and their health and recreation choices are often tied to the place they live. The built environment, including transportation infrastructure, building location and design, and overall development patterns also directly impact natural systems and the climate in ways that aren't always apparent. This is important because natural systems play a role in maintaining air quality, regulating temperature and precipitation, preventing flooding, and providing clean water for drinking.

As the climate changes, extreme weather events will become more frequent and more intense. Designing our built environment to be resilient and adaptable can help mitigate the impacts of climate change and improve the environment and public health.

Sustainable neighbourhood development can use a number of different strategies to minimize air and water pollution, preserve natural systems, and reduce greenhouse gas emissions while encouraging a high quality of life. These include:

- Compact Development;
- Mixed Land Uses and Mixed Use Development;
- Green Buildings; and
- Low Impact Development.

## 2.2.1 Compact Development

Compact development is development that maintains a minimal footprint and employs minimum densities in order to conserve land. Making neighbourhoods more compact provides increased access to amenities and employment opportunities due to the reduced distance people need to travel. Since travel distance is reduced, cycling, walking, and transit become a more attractive mode of travel, reducing potential greenhouse gas emissions and improving quality of life.

Compact development can be achieved through including higher density residential land uses, mixed use development, and infill strategies.

## 2.2.2 Mixed Land Uses and Mixed Use Development

Mixed land uses combine a mix of compatible land uses close together and can exist in the form of a building, an urban block, or an entire neighbourhood. Mixed use neighbourhoods reduce reliance on vehicles and encourage walking, cycling, and transit usage due to reduced travel distances. A mix of uses may also enable live-work situations which improve overall quality of life due to reduced commute times. Mixed use neighbourhoods can be developed in multiple forms by stacking multiple uses vertically or ensuring a mix of uses is provided horizontally.



*Townhomes are one way that compact development can be accommodated in a way that is sensitive to adjacent low-density land uses. (Source: Brook McIlroy)*



*Mixed use developments can incorporate office, commercial, and residential uses that fit the local context and needs. (Source: Brook McIlroy)*



*These town houses are projected to deliver a 65% reduction in energy consumption compared to an average home. Additional insulation, energy monitoring systems, and water efficient fixtures contribute to the homes' energy efficiency. (Source: Minto Homes)*

### 2.2.3 Green Buildings

A green building is designed, constructed, and operated to reduce or eliminate negative impacts on the climate or natural environment. Green buildings may include initiatives to reduce consumption of energy, water and other resources; utilize renewable energy; reduce waste and promote recycling; and consider the natural environment in designs and site selection. The design of a green building also takes into consideration the quality of life of its occupants - and may include measures for improving indoor environmental air quality, incorporation of natural light and views, and temperature regulation through passive design.

A building has the potential to be a green building regardless of its associated use. Additionally, existing buildings can often be retrofitted or renovated to reduce energy



*Alternative energy sources such as photovoltaic cells are sometimes considered to supplement energy consumption. (Source: Sustainable Architecture and Building Magazine)*

consumption and reduce waste. Careful consideration of a building's environmental context and site conditions is typically very important in the design of a green building.

A number of rating tools or certifications exist to measure whether buildings meet various green building standards. The tools take several different approaches in assessing sustainability during the design, construction, and occupation of buildings.



*The University of Ontario Institute of Technology Campus is accredited with L.E.E.D. Gold status, and includes a number of L.I.D. strategies such as green roofs, parking lot bio-swales, greywater recycling, and stormwater detention and retention ponds. (Source: DTAH)*

## 2.2.4 Low Impact Development (L.I.D.)

Low Impact Development (L.I.D.) is an approach to stormwater management that mimics natural hydrology and manages stormwater as close to its source as possible. The goal of low impact development is to protect aquatic habitats and their water quality through mimicking natural hydrological processes. As flood events have increased and high rainfall events occur with more frequency due to climate change, L.I.D. can assist in reducing stormwater runoff and volumes.

Low impact development strategies at a neighbourhood and site level include the following:

- Reducing the amount of impervious area on a site
- Utilizing natural drainage systems
- Preserving important hydrological features
- Bioswales and rain gardens
- Green roofs
- Permeable pavement
- Rainwater harvesting

## 2.3 Natural Systems

Natural systems provide numerous benefits - many of which are necessary for our daily lives. Air regulation through photosynthesis, the provision of clean water, food, and materials, as well as recreational and educational uses are only a few of the ecosystem benefits we rely on daily. Historically, neighbourhood development has had some impacts on natural systems through habitat destruction and fragmentation and degradation of water sources.

There are a number of measures that can be taken to ensure that existing natural systems are preserved and enhanced while developing new neighbourhoods. These include:

- Preserving Existing Significant Natural Systems; and
- Flood Protection and Avoidance.

### 2.3.1 Preserve Existing Significant Natural Systems

Existing significant natural systems including wetlands, watercourses, woodlands and natural habitats already serve to provide us with many of the ecosystem benefits described in previous paragraphs. Preserving existing forest and natural systems, such as wetlands, assists in reducing carbon dioxide, one of the major greenhouse gas contributors to climate change. In addition to sustaining our access to healthy air and water, the natural systems add to quality of life and a community's sense of place.

A number of Provincial, Regional and City policies, as well as the regulations of Conservation Authorities, exist to mitigate adverse impacts on the natural system caused by urban growth and intensification. The Greenbelt Plan is an example of this. Established to protect green spaces, farmland, communities, forests, wetlands and watersheds, the Greenbelt area extends 325 kilometres across the Greater Toronto and Hamilton Area including areas along river valleys in the Study Area. The Greenbelt is designed to protect against the loss of fragmentation of agricultural land; ensure protection of natural heritage and water resources; provide for a diverse range of economic and social activities; and mitigate climate change.

The Durham Regional Official Plan identifies policies for lands within Regional Greenlands System including open spaces that “weave through and between the Urban and Rural Systems to ensure ecological health and renewal, and to assist in creating distinct Urban Areas”(Section 10.1.1). Development proposals within the Greenlands System are subject to providing evidence that the proposal is designed to make every effort to preserve the ecological benefits and biodiversity of the Greenlands System including groundwater resources, air

purification, wildlife habitats and scenic and recreational values.

The City's Official Plan also identifies a Natural Heritage System (Schedule 'D-1') including lands in the Study Area. The Official Plan directs that “protection of this system is necessary to support ecological integrity including healthy terrestrial, wildlife, wetland and aquatic ecosystem.” Section 5.4.1)

### 2.3.2 Flood Protection and Avoidance

Flooding occurs when the volume of water in a water system exceeds its capacity and inundates the surrounding low-lying areas. As the climate changes, heavy rainfall events are occurring at higher frequency. These intense rain events are predicted to be more frequent and may subsequently cause increased flooding risk.

Development has in the past occurred in areas prone to flooding, and development also contributes to a higher risk of flooding. In accordance with Provincial policy, development in flood prone areas is prohibited.

### 2.3.3 Natural Hazards

Natural hazards in the Columbus Part II Planning Area include slope and erosion hazards as well as meanderbelt hazards. These hazards are typically associated with lands designated as Significant Valleylands. In accordance with Provincial policy, development in hazardous lands is prohibited.

## 2.4 Community Integration

Community integration in the development of neighbourhoods is an important factor in achieving the social and economic goals of sustainability. Key to insuring quality of life across all ages and demographics, community integration involves consideration of all current and future residents in the planning and design of communities. While the effect of community integration is harder to quantify than other categories, it is an aspect of sustainability that has a clear link to resident's quality of life, and the livability of a neighbourhood.

Strategies for community integration must differ according to context and communities. In the Columbus Study Area, community integration can be achieved through the following strategies:

- Diverse Housing Supply
- Accessibility
- Community Engagement





Community involvement through public consultation and engagement program (Photo Credit: Brook McIlroy)

### 2.4.1 Diverse Housing Supply

In the recent past, traditional forms of development and planning created single use residential areas within communities, often with limited housing options. This form of development often tended to create homogeneous communities. Today, development and planning encourages a diverse range in housing to insure a range of people are able to live in a community. Housing diversity may include a mix in unit or housing type, and housing tenure.

### 2.4.2 Accessibility

Accessible housing, transportation, and civil services provide opportunities to insure that people who are less able have equal access to services and employment.

The City of Oshawa recently published Accessibility Design Standards in order to enhance accessibility beyond the Ontario Building Code. The standards intend to meet the needs of all Oshawa residents in order to benefit people of all ages and abilities.

### 2.4.3 Community Engagement

Establishing dialogue and building strong relationships with stakeholders is a critical component to insure a successful project. Community involvement and participation can aid in the efficiency of project implementation, cost, and sustainability. As well, drawing on local knowledge from the community may create effective, practical solutions that are ultimately better supported by the community.



## Part 3 : Next Steps

The principles proposed in this report will be considered in the preparation of the Development Alternatives and Urban Design Guidelines developed in later stages of the Integrated Columbus Part II Planning Act and Municipal Class Environmental Assessment Act Study.



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