WHITBY SUSTAINABLE DEVELOPMENT GUIDELINES

BACKGROUND REPORT



Prepared for:

WHITBY
ONTARIO • CANADA

Prepared by:

URBAN EQUATION

The Planning Partnership

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1.0 WHY CHANGE

1.1 THE ENVIRONMENTAL IMPERATIVE FOR CHANGE

The Intergovernmental Panel on Climate Change's (IPCC) Special Report on Global Warming of 1.5°C, released in October 2018, advanced two primary conclusions: the effects of climate change are already being felt, and without rapid and far-reaching transitions in land use, industry, transport, and city planning, those effects will continue to worsen[1]. The report found that limiting global warming to 1.5°C, the upper limit beyond which management and adaptation will rely on unproven technologies, will require reaching net zero carbon by 2050. As of 2019, the rise in global temperature has already reached 1°C; in order to prevent eclipsing a 1.5°C increase, global net human-caused emissions of carbon dioxide need to be reduced by 45 percent from 2010 levels by 2030. In other words, we have eleven years to act, and that action must be intentional, swift, and cooperative. The health and well-being of humans, communities, and the ecosystems on which we rely is dependent on reaching this end. It is against this backdrop that governments have begun to formalize policy frameworks, plans, and strategies to manage growth in a sustainable and equitable manner.

1.2 THE POLICY IMPERATIVE FOR CHANGE

In 2006, Bill 51, the Planning and Conservation Land Statute Law Amendment Act, ushered in changes to the Planning Act encouraging sustainable development. Section 2 of the Act was amended to promote the efficient use and conservation of energy and water, the development of safe and healthy communities, and development that is designed to be sustainable, support public transit, and be oriented to pedestrians. Importantly, the amendment to subsection 41 (4), Approval of plans or drawings, brought this to bear on the development process, whereby the purview of site plan control was widened to include the sustainable design of matters relating to elements exterior to buildings. Now a matter of provincial interest, sustainable design must be considered by municipal councils in their decision-making processes.

1 https://www.ipcc.ch/2018/10/08/summary-for-policymakers-of-ipcc-special-report-on-global-warming-of-1-5c-approved-by-governments/

1.3 THE ECONOMIC IMPERATIVE FOR CHANGE

According to a study led by James Hansen, the costs of climate change mitigation inaction and delay could be as high as US$535 trillion[1]. The financial impact of climate change has already come to bear in Canada; insurance companies in Canada incur approximately $1-billion annually in natural catastrophe claims[2]. As weather events continue to increase in severity, municipalities are at risk given aging and undersized infrastructure, with the potential to exacerbate the magnitude of natural catastrophe claims. Insurance companies are aware of this risk and have reacted by declining home insurance applications in flood-prone neighbourhoods, shifting the risk onto homeowners. The potential economic impacts are severe, whereby catastrophic economic failure is possible due to homeowners defaulting on mortgages on a large scale.

The call to urgent action has also been heard from the Canadian Chamber of Commerce (CCC); in their December 2018 report, the CCC argues that "the body of evidence [for climate change] is conclusive[3]" and that "our need to transition to a low carbon economy is clear."

The Ontario Chamber of Commerce relayed a similar message, calling on the Government of Ontario to develop "adaptable and resilient infrastructure standards that can address various future pressures including climate change," noting that the cost of inaction would have serious economic impact[4].

The response of economic institutions and organizations signals that there is growing momentum behind the demand for change in how we build and manage our cities. This momentum is underwritten by sophisticated economic and climatic models which flag the impending consequences of climate change and related extreme weather events on our economic institutions and city infrastructure. This is no longer an experiment: the evidence is here.

1 Hansen, James, J. H. (2017, July 18). ESD - Young people's burden: requirement of negative CO2 emissions.
2 Forbes, Richard, R. F. (2018, April 5). Canadian Industrial Outlook: Insurance—Winter 2018.
3 Canadian Chamber of Commerce. (2018, December). Climate Competitiveness: Getting Canada's Climate Policies Right.
4 Ontario Chamber of Commerce. (2017). BUILDING BETTER: Setting up the Next Ontario Long-Term Infrastructure Plan for Success.

1.4 THE ROLE OF MUNICIPALITIES IN CHANGE

Municipalities have the power to help themselves and build and protect their own municipal infrastructure. However, the current pattern of development in many municipalities is placing a strain on the natural environment and the health of residents. Ontario municipalities, as empowered by provincial legislation, can play a critical role in reorganizing these patterns to achieve sustainable and equitable outcomes. Indeed, municipalities have the power to guide site development decisions as they relate to the social, environmental, and economic dimensions of sustainability, and in the process ensure the needs of the present are not met at the expense of the needs of the future.

In a province experiencing significant population growth, municipalities are increasingly investigating how to best manage the resultant pressures on development to strike this balance. Since 2006, a number of municipalities commenced the process of developing green development checklists and incentives, which have since evolved into more robust sustainable development guidelines. It is important to note, however, that municipal powers only reach so far; in order to induce the sort of behavioural and operational changes needed to shift construction and development patterns, incentives are critical. As detailed in Section 4.0, although many municipalities have explored, or are in the process of exploring incentives, only a small number have actually implemented them in a material way.

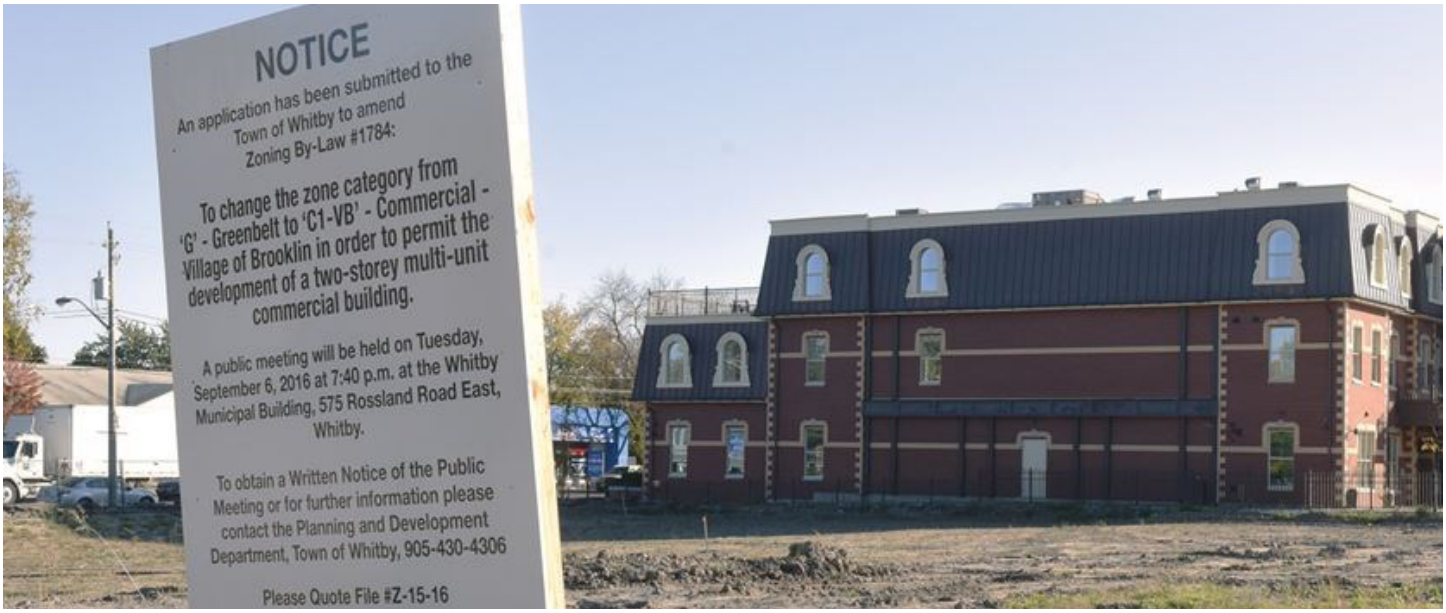
1.5 WHITBY'S PLAN FOR CHANGE

Following the completion of its Official Plan review, the Town of Whitby codified policies which advance its vision for a healthy, complete, and sustainable community with a strong and competitive economy. In response to the town's anticipated population growth and resultant development pressure, the Town has leveraged these policies to initiate the development of sustainable development guidelines, intended to support and promote sustainable site design for development and redevelopment on public and private property. These guidelines are envisioned to incorporate energy efficient building and site design, water conservation techniques, green infrastructure, sustainable building materials, waste reduction, on-site renewable energy generation and recovery, natural heritage preservation, active transportation, cultural heritage, climate change adaptation, and land use compatibility.

Getting it right is imperative, particularly because future development in Whitby will largely be greenfield. Greenfield is one of highest carbon development types. New greenfield development is highly dependent on cars, lacking the sort of transit infrastructure needed to induce modal shifts away from single occupant vehicles – particularly problematic given that 34% of carbon emissions are precipitated by transportation. Greenfield development is also challenging given that is completely driven by the market place. The Town also anticipates future infill development, primarily within the downtown area. It will be

critical to get ahead of this intensification to, among other end goals, reduce the impact of development on existing infrastructure, connect to and enhance existing active transportation networks through ongoing Town projects and initiatives, and maximize accessibility to community amenities and open spaces.

Armed with the most contemporary scientific evidence of climate change, Whitby has the opportunity to assert itself as a leader in sustainability. The facts that we have today are not the facts that informed previous municipal sustainability development guidelines. We need to respond to today's science, not yesterday's. While the Town has responded to extreme weather events at an engineering level through updates to Design Criteria and Engineering Standards (e.g. higher runoff coefficients, requiring dual drainage models, placement of inlet controls, requiring larger Minimum Basement buffers), it is acknowledged that a more wholesome and robust approach is needed Town wide to ensure the Town is being proactive versus reactive in nature. New communities will not be revisited for decades. Billions of dollars will be spent developing communities which are outdated before shovels hit the ground. The need here is pressing, and the time horizons are vast. The Sustainable Development Guidelines represent an opportunity to get ahead of growth pressure, prevent inefficient development, and ensure the Town meets its own sustainability ambitions while contributing to the larger goal of reducing carbon emissions.



Infill development in the Village of Brooklin, located within the Town of Whitby.

2.0 ORGANIZING FRAMEWORK

We only have one planet Earth, but as a global society we are living as if we have several planets and consuming in ways which cannot be sustained. To live within the allowances of one planet, significant changes will be required, but we also know that if we work together, we can enjoy just as much comfort, more security and better health, while living lives that are enriching, fulfilling and sustainable.

2.1 TEN PRINCIPLES OF SUSTAINABILITY

In our experience, successful sustainable development guidelines require:

- Excitement and engagement of the entire community
- Education and clear messaging that everyone understands
- Ability to align multiple stakeholders around a simple set of goals
- Clear process for measuring and monitoring success

The One Planet Living (OPL) sustainability framework offers municipalities a clear model to make it easy and attractive for all of us to lead happy and healthy lives within the environmental limits of our planet. It is a simple framework which enables everyone – from the general public to professionals – to collaborate on a sustainability strategy; drawing on everyone's insights, skills and experience. It is based on ten guiding principles of sustainability - from health and happiness and sustainable food to zero carbon energy - which can be used to create holistic, joined-up solutions while providing a common language to talk about sustainability and drive change.

The organization of the subsequent policy review (section 3.0), and indeed the eventual Sustainable Development Guidelines, will be predicated on One Planet Living's sustainability framework. As evidenced in section 3.0, many of the existing policies at all levels of government align with One Planet Living's ten sustainability principles; these policies will be used to inform the mandatory guidelines under each of the ten principles.

ONE PLANET LIVING

One Planet Living is a vision of the world where everyone, everywhere can live happy, healthy lives within the limits of our planet, leaving space for wildlife and wilderness.

Health & Happiness

Encouraging active, sociable, meaningful lives to promote good health and wellbeing.

Local & Sustainable Food

Promoting sustainable humane farming and healthy diets in local, seasonal organic food and vegetable protein.

Equity & Local Economy

Creating safe, equitable places to live and work which support local prosperity and international fair trade.

Materials & Products

Using materials from sustainable sources and promoting products which help people reduce consumption.

Culture & Community

Nurturing local identity and heritage, empowering communities and promoting a culture of sustainable living.

Travel & Transport

Reducing the need to travel, and encouraging walking, cycling and low carbon transport.

Land & Nature

Protecting and restoring land for the benefit of people and wildlife.

Zero Waste

Reducing consumption, reusing and recycling to achieve zero waste and zero pollution.

Sustainable Water

Using water efficiently, protecting local water sources and reducing flooding and drought.

Zero Carbon

Making buildings and manufacturing energy efficient and supplying all energy with renewables.

3.0 CURRENT POLICY

The imperative to plan sustainably within the Town of Whitby is established in a suite of provincial, regional, and municipal policy documents and plans. This section provides an overview of the relevant policies, strategies, and directions that will inform future work, including the preparation of the Sustainable Development Guidelines, Checklist, and supportive training and marketing materials.

3.1 PROVINCIAL CONTEXT

The Planning Act (the Act) is a foundational provincial document which sets out the ground rules for land use planning and decision-making authority in Ontario. Importantly, the Act outlines a number of matters of provincial interest, which relate to sustainability planning, including the orderly development of safe and healthy communities, the provision of a full range of housing and community amenities, protection of ecological and hydrological systems, minimization of waste, and mitigation of greenhouse gas emissions and adaptation to a changing climate.

The Provincial Policy Statement (PPS) advances policy direction on the matters of provincial interest established by the Planning Act. The policies advanced by the PPS, which apply province-wide, strike a balance between environmental, economic, and social factors, together representing the three pillars of sustainability. At its core, the PPS establishes the need for efficient land use and development patterns that support sustainability by promoting strong, liveable, healthy and resilient communities, protecting the environment and public health and safety, and facilitating economic growth.

The Growth Plan for the Greater Golden Horseshoe (the Plan) provides strategic direction for growth management across Ontario; in other words, how and where to grow. The Plan was conceived out of a provincial desire to create communities that support economic prosperity, protect the environment, and achieve a high quality of life. More specifically, the Plan advances policies related to human health and active living, equitable housing opportunities, sense of place, access to parks and open space, sustainable stormwater management, urban agriculture, active transportation, waste management, and low-carbon communities.

The Ontario Building Code (OBC) defines the level of performance buildings are required to meet through the Supplementary Standard SB-10, with the goal of increasing efficiency over time. For context, in 2012 the SB-10 became 15% more efficient than the 2006 version, and in 2017 became 13% more efficient than 2012. These levels of efficiency are intended to increase every four years.
The changes to the current Code, which will come into effect January 1st, 2019, have been devised in an effort to step the requirements of new houses and large buildings towards net-zero. In practical terms, three of the most significant changes include adding a loading requirement to roof designs for all new large buildings to futureproof for solar technologies; a requirement for a conduit on all new houses and large buildings to allow for the installation of solar photovoltaics or a solar hot water system; and a requirement for all apartment buildings and condominiums to incorporate a heat or energy recovering unit as part of their ventilation systems.

The Low Impact Development Stormwater Guidance Manual, still under development, complements the 2003 Stormwater Management Planning and Design Manual, with a particular focus on source and conveyance controls. The goals of the Manual include ensuring the application of a consistently derived, geographically specific volume control target across the province; providing a scientifically based approach for sizing stormwater practices; and facilitating greater consistency and integration of stormwater management among the province's cities. The Manual advances a series of principles to reach this end.

PROVINCIAL POLICY SUMMARY STATEMENTS

The summary statements below have been developed by aggregating the intent of policies in the provincial documents reviewed as they relate to the ten One Planet Living Principles.

OPL Principle	Provincial Policy Summary Statement
HEALTH & HAPPINESS	Create complete communities that foster individual and community safety, health, and wellbeing.
EQUITY & LOCAL ECONOMY	Support and include people of all ages, abilities, and incomes through equitable access to housing, education, and recreation opportunities.
CULTURE & COMMUNITY	Conserve and celebrate cultural heritage resources to foster a sense of place and civic pride.
LAND & NATURE	Conserve and protect the natural features and functions of ecological systems, having consideration for the impacts of a changing climate.
SUSTAINABLE WATER	Promote best practices in stormwater management and potable water conservation.
LOCAL & SUSTAINABLE FOOD	Provide access to healthy, local, and affordable food options.
SUSTAINABLE TRANSPORTATION	Expand convenient access to a range of transportation options, including active transportation and transit, to enhance connectivity and reduce greenhouse gas emissions.
MATERIALS & PRODUCTS	Manage natural resources through a conservation approach.
ZERO WASTE	Develop and implement strategies to enhance waste reduction, reuse, and recycling, composting, and sustainable management of construction material and waste.
ZERO CARBON	Support the transition to low-carbon communities, with the long-term goal of net-zero communities.

3.2 REGIONAL CONTEXT

The Durham Region Official Plan (the ROP), currently subject to a Municipal Comprehensive Review, advances the intent of the Regional Council regarding growth and development, with a time horizon of 2031. The ROP is rooted in a desire to improve quality of life, secure present and future residents' health, safety, convenience, and wellbeing, and establish the future development pattern of the Region.

Growing Together, Reaching Further, Aspiring Higher: A New Strategic Plan for Durham Region (the Strategic Plan) establishes the long-term vision for Durham Region, in addition to goals and strategies informed by the region's evolving needs. Three of the Strategic Plan's goals are relevant to Whitby, including Population Health and Quality of Life, Healthy Environment and Sustainable Communities, and Organizational Health and Service Excellence.

The Durham Community Energy Plan (DCEP) will accelerate the transition to a clean energy economy in Durham while simultaneously achieving multiple economic, environmental and social benefits. The DCEP is currently under development, with the stated intent to reduce energy use, reduce greenhouse gas emissions, improve energy efficiency, foster innovative clean energy technology, and plan ahead for future growth and development.

The Regional Cycling Plan (RCP) provides an update to the original RCP, adopted by Regional Council in 2008. The RCP sets out recommended additions to the existing regional cycling network, a series of policies that establish responsibility for infrastructure between the Region and Area Municipalities, and a cycling network hierarchy. The RCP recognizes the importance of communication as it relates to education, promotion, and enforcement methods that complements the infrastructure expansion. Moreover, it establishes different methods of communication depending on the audience (e.g. commuter cyclists, recreational cyclists, and potential cyclists). Finally, the RCP sets out the specific needs of different audiences, cycling network principles, roadway characteristics, and facility treatment types.

Keeping Our Cool – Managing Urban Heat Islands in Durham Region provides a series of maps showing the areas within Durham Region that have high surface temperatures – and resultant hot spots –and advances a number of solutions to reduce the urban heat island effect. These solutions generally coalesce around infrastructure, building and site design measures, material usage, and building energy efficiency.

Towards Resilience - Durham Community Climate Adaptation Plan (Towards Resilience) represents the Region's plan for climate adaptation in the community of Durham. It includes 18 proposed programs which have been approved in principle by the Council of the Regional Municipality of Durham on behalf of the Durham community on December 14, 2016. The document is organized around a series of objectives and programs related to the building sector, electrical sector, flooding sector, human health sector, road sector, natural environment sector, and food security sector.

Climate Resilience Standard for New Homes (CRS), in the process of being completed, emerged from a growing need to ensure low-rise residential buildings are built to be resilient to current and future extreme weather events. Building on Part 9 of the Ontario Building Code, CSR focuses on increasing the resilience of low-rise residential buildings as it relates to basement flooding, extreme wind and tornadoes, and extreme heat events. The standards contained in the CSR are complementary to existing provincial, conservation authority, and municipal requirements related to location, design, construction, and inspection of low-rise residential buildings and lots.

REGIONAL POLICY SUMMARY STATEMENTS

The summary statements below have been developed by aggregating the intent of policies in the regional documents reviewed as they relate to the ten One Planet Living Principles.

OPL Principle	Regional Policy Summary Statement
HEALTH & HAPPINESS	Create healthy, happy, and adaptable communities that encourage active living and healthy lifestyles.
EQUITY & LOCAL ECONOMY	Provide a range of innovative and attainable housing types and tenures, promote inclusivity to meet the needs of all residents, and increase social resiliency against weather and climate emergencies.
CULTURE & COMMUNITY	Provide community infrastructure to promote social interaction and celebrate cultural diversity, heritage, and the arts.
LAND & NATURE	Protect significant features and functions of the natural environment while enhancing water resources, natural heritage, and environmentally sensitive areas.
SUSTAINABLE WATER	Use stormwater management measures to re-duce water pollution, conserve and manage water use, and reduce flooding.
LOCAL & SUSTAINABLE FOOD	Provide convenient access to fresh, locally grown food to enable food security for all residents.
SUSTAINABLE TRANSPORTATION	Ensure transportation infrastructure is functional, integrated, reliable, and barrier-free to support the movement of people by a range of modes, including active transportation and transit.
MATERIALS & PRODUCTS	Use materials that contribute to reducing the impacts of the heat island effect.
ZERO WASTE	Reduce, reuse, and recycle waste.
ZERO CARBON	Reduce energy use, reduce greenhouse gas emissions, improve energy efficiency, foster innovative clean energy technology, and plan ahead for future growth and development.

3.3 MUNICIPAL CONTEXT

The Town of Whitby Official Plan (the OP) provides policies that support the creation of healthy, complete, sustainable communities that support optimal quality of life, health, safety, convenience, and welfare for the present and future residents of the Municipality. Policy 3.2.1.1 codifies this intent by noting Whitby's commitment to the planning and design of development that embraces the principles of sustainability, and achieving the vision as set out in policy 3.2.4.2: reduce the town's environmental footprint, improve quality of life, and improve the economy through the efficient and effective utilization of resources. This sentiment was recently echoed in the Town of Whitby City Council's 2018-2022 term goals, which include increasing its understanding of the importance of sustainability and affordability to a healthy, balanced, community.

The OP also provides the policy language required to initiate the Sustainable Development Guidelines (3.2.4.3) and performance checklists (3.2.4.6) to be delivered in the subsequent phases of this project. As outlined in policy 3.2.4.5, the Guidelines are expected to address a number of issues, including energy efficiency, water conservation, building materials, waste reduction, renewable energy, natural heritage preservation, active transportation, cultural heritage, public health and safety, and climate change adaptation.

The Cycling and Leisure Trails Plan (CLTP) takes direction from provincial, regional, and town plans and strategies to shift the modal split in Whitby from automobile use to walking, cycling, and other forms of active transportation to support and promote physical activity. The CLTP is guided by three key objectives: support active transportation for families, create links between residential and employment/ commercial centres, and establish connections between rural Whitby and the waterfront. In order to meet these objectives, the Town prepared a complementary design toolbox to inform the design of the network and active transportation facilities, using an equity lens to reduce barriers to participation. In addition to advancing a recommended network, the CLTP also provides an implementation plan, in addition to supportive policies, which will inform the Whitby Sustainable Development Guidelines.

MUNICIPAL POLICY SUMMARY STATEMENTS

The summary statements below have been developed by aggregating the intent of policies in the municipal documents reviewed as they relate to the ten One Planet Living Principles.

OPL Principle	Regional Policy Summary Statement
HEALTH & HAPPINESS	Manage growth in a balanced way to sustain and positively impact the health of the community and quality of life.
EQUITY & LOCAL ECONOMY	Provide a hierarchy of commercial areas to serve neighbourhood, community, and municipal-wide needs, and provide sufficient residential land to satisfy housing needs in terms of housing type, tenure, density, and affordability, taking into account household size and in-comes.
CULTURE & COMMUNITY	Manage growth in a balanced way to sustain and positively impact the civic identify and cultural heritage assets.
LAND & NATURE	Establish, maintain, preserve and enhance an integrated and linked system of public open spaces, natural heritage and hydrologic features, agricultural lands, rural uses, parkland and recreational facilities that meets the needs of present and future residents and maintains a healthy and resilient Natural Heritage System.
SUSTAINABLE WATER	Incorporate appropriate stormwater management techniques and practices at the initial stage of all new development, upgrading, and redevelopment in the Municipality, including consideration for green infrastructure, low impact development measures and the reduction of impervious surfaces.
LOCAL & SUSTAINABLE FOOD	Support the establishment of community gardens, rooftop gardens, and farmers' markets in appropriate locations to contribute to the accessibility of locally grown produce in urban areas, thereby lowering energy consumption, greenhouse gas emissions, and transportation costs.
SUSTAINABLE TRANSPORTATION	Encourage sustainable transportation initiatives, supporting active transportation, complete communities and healthy lifestyles.
MATERIALS & PRODUCTS	Encourage energy conservation through the use of energy-efficient materials and landscaping.
ZERO WASTE	Encourage energy conservation by encouraging efficient waste and resource management principles.
ZERO CARBON	Encourage development and redevelopment of lands and upgrading and retrofitting of infrastructure and buildings to reduce energy consumption and greenhouse gas emissions through efficient site and building design and innovative construction techniques.

4.0 BEST PRACTICES - A KIT OF PARTS

In addition to relevant policy, the Whitby Sustainable Development Guidelines will be informed by a number of best practices from other municipalities. This section outlines existing sustainable development guidelines and standards in effect across a number of Ontario municipalities.

4.1 KEY TAKEAWAYS

- Although the importance of incentives is noted in all sustainability programs, the only municipalities offering direct financial incentives are Toronto (development charge rebate) and Mississauga (stormwater charge reduction).
- The Official Plans of the majority of municipalities reviewed require the submission of a completed sustainability checklist as part of a complete application.
- Checklists provide a simple tool for developers to communicate the project's sustainability initiatives to the planning staff.
- In all municipalities reviewed, applicants are first made aware of the checklist and requirements during the pre-application consultation with planning staff.
- All checklists have been devised with at least two levels of compliance: mandatory and voluntary. Mandatory requirements are generally informed by existing provincial, regional, or municipal policy, whereas voluntary represent stretch measures that are of interest to the municipality but that they cannot necessarily mandate.
- All checklists are required to be submitted as part of a complete application.

THE KIT OF PARTS



Policy Context and Process

The prevailing policies and strategies, primarily in Official Plans, to mandate compliance with the sustainable development guidelines.



Targets and Requirements

Each set of sustainable development guidelines advances voluntary and/or mandatory requirements and related targets, and in some cases, performance tiers.



Tools and Incentives

There are myriad tools and incentives to support implementation of stretch requirements and targets, some financial, and others procedural.



Applicant Resources

In order to educate the development community about the guidelines, many municipalities provide resources, including brochures, manuals, and guidebooks.

4.2 MUNICIPAL BEST PRACTICES

East Gwillimbury: Thinking Green! Development Standards

Thinking Green! Development Standards (TGDS) measures fall under three key theme areas: Protection and Enhancement of the Natural Environment, Conservation of Energy and Water, and Designing for Complete and Connected Communities. Measures apply to both building and site criteria.



Policy Context and Process

The policy imperative for adhering to TGDS is set out in East Gwillimbury's Official Plan; policy 2.4.3 requires that all development address the minimum standards necessary to satisfy the applicable elements outlined in the Thinking Green Development Standards to the satisfaction of the Town. To demonstrate compliance, applicants are expected to fill out and submit the Application Information Form and the Pre-Consultation TGDS Checklist as part of the Pre-Consultation Application Package, and fill out the Application Information Form and TGDS Assessment during application preparation.



Targets and Requirements

The TGDS measures are organized into three tiers: level 1 represents the minimum expectations of the Town; level 2 represents an improved standard; and level 3 represents the optimal achievement. At a minimum, applications are expected to achieve all level 1 requirements, and two level 2 targets under each theme or one level 3 target under each theme. Level 1 requirements align with policies in East Gwillimbury's Official Plan related to the protection and enhancement of the natural environment, conservation of energy and water, and design of complete and connected communities.



Tools and Incentives

Applicants are expected to fill out a pre-consultation TGDS checklist as part of the pre-consultation application. There are checklists for both Draft Plan of Subdivision and Site Plan applications. Per the Official Plan, the Town will explore possible incentives programs designed to reward sustainable community design and development. Such incentives may include priority consideration for development approvals, funding support through available government programs, and other reasonable measures designed to offset additional development costs associated with the Town's sustainable development requirements.



Applicant Resources

- User Guide
- Information Form
- Checklists
- TGDS Assessment

Pickering: Sustainable Development Guidelines

The Guidelines represent a vision for community development aimed at reducing the ecological footprint of homeowners and promoting healthy and liveable neighbourhoods. The Guidelines are intended to apply to all new development – residential and employment for infill, redevelopment and new designated urban areas.



Policy Context and Process

Per Official Plan policy 16.5A, the sustainable development report, or checklist, must be submitted at the time of application for an official plan amendment, zoning by-law amendment, draft Plan of Subdivision, or draft Plan of Condominium approval. The report is expected to describe the sustainable measures being implemented through the development, including but not limited to initiatives related to energy efficiency, water efficiency, building materials, indoor air quality, landscaping, stormwater management and construction waste.



Targets and Requirements

The Pickering SDG are divided into mandatory (those required by way of provincial, regional, and local policy) and optional categories. All new development must meet at least a rating of "Level 1", with some minor exceptions. Level 1, in this case, is defined as achieving all required elements, plus a minimum number of points from optional guidelines depending on application type (neighbourhood vs. plans of subdivision, Site Plans, rezoning, and building permits).



Tools and Incentives

The Pickering SDG are enumerated in a non-interactive checklist format that outlines the targets and measures associated with levels 1, 2, and 3. Proponents of projects who demonstrate achievement of Level 1 through the checklist receive recognition by the City. Other cited benefits of meeting Levels 2 or 3 include marketing opportunities and possible access to provincial/federal or other green funds.



Applicant Resources

- City of Pickering Sustainable Development Guidelines

Halton Hills: Green Development Standards

Thinking Green! Development Standards (TGDS) The Green Development Standards apply within the Town's urban boundaries to applications for new low-rise residential, low-rise non-residential, and mid to high-rise development of all types. Renovations, alterations and development consisting of less than four residential lots are subject to existing requirements. The Green Development Standards utilize a LEED-like approach, whereby applicants can choose the most appropriate criteria for the project (so long as a minimum point threshold is achieved), setting it apart from other checklist types which delineate required and voluntary criteria.



Policy Context and Process

The Halton Hills Official Plan contains policy requiring compliance with the Green Development Standards; policy C19.1 notes that a development application will only be deemed to have met the Town's sustainability goals if it meets the requirements of the Green Development Standards adopted by Council, and as amended from time to time, to provide detailed direction for the implementation of this policy. It is expected that applicants will engage with staff early in the pre-application process to maximize green benefits.



Targets and Requirements

The Green Development Standards comprise required and voluntary points, depending on the criteria. Proponents must meet a minimum required point threshold (the number depends on type of project). Using a LEED-like approach, the criteria are rated on both the significance of the environmental benefits and the difficulty or cost associated with implementation. The checklists criteria are organized into seven categories: energy conservation, water conservation and quality, community design, air quality, innovation and other green features, waste management, and communication.



Tools and Incentives

The Town has produced checklists for low-rise residential, low-rise non-residential, and mid to high-rise (any use) projects. While the Town does not directly offer incentives for achieving higher performance, it does encourage applicants to contact Halton Hills Hydro, Union Gas and the Ontario Power Authority regarding current energy incentive programs.



Applicant Resources

- Green Development Standards Study
- Green Development Standards Information Guide

Burlington: Sustainable Building and Development Guidelines (in development)

The Sustainable Building and Development Guidelines (SBDG) will serve as a comprehensive checklist of various sustainable design, construction and operation approaches, and will be used as a tool to assess the sustainable features of development applications. Once completed, the checklist will act as a tool to encourage voluntary update of sustainable design and planning practices, as well as highlight the required sustainability measures as codified in Burlington's Official Plan, Zoning By-law, and other city by-laws.



Policy Context and Process

The applicant will be made aware of the guidelines and checklist at the pre-consultation meeting. The checklist will be identified on the Pre-consultation Form and any required supporting documentation will be identified.



Targets and Requirements

Applicants need to comply with the items identified as "required," which align with municipal policies already in place, but are encouraged to consider voluntary items. Voluntary measures, if selected, should appear on application materials, but there is no requirement to achieve any additional stretch beyond what is already mandated. The criteria have been organized into eight sections: site design; transportation; natural environment; water conservation and quality; energy; waste and building materials; maintenance, monitoring, and communication; and innovation.



Tools and Incentives

Applicants will be expected to fill out and submit a checklist demonstrating adherence to, at a base level, the required criteria of the SBDG. In order to incent deeper sustainability outcomes, Burlington is developing unique "carrot" measures, including an Urban Design Awards program that will include sustainable building awards, given out to those projects achieving the greatest number of voluntary guidelines. Additionally, the voluntary guidelines may be used in Section 37 under the Planning Act.

Clarington: Priority Green Clarington

Priority Green Clarington (PGC) aims to set a standard for residential development that prioritizes sustainability, promotes innovation and improves the community's quality of life. PGC was designed to address Council's vision of building a sustainable, creative and caring community and to support the Municipality's commitment to sustainable development. PGC is applicable to Secondary Plans, Plans of Subdivision, and Site Plans.



Policy Context and Process

As part of complete application, applicants are required to submit a Sustainability Report that summarizes how the design and construction of the proposed development meets the sustainable development objectives of the Municipality of Clarington Official Plan. This report serves a secondary function helping to facilitate the Municipality's review of an application's conformity with the green development program.



Targets and Requirements

The targets included in PGC have been organized into three tiers: Mandatory Minimum Requirements (what is already required in the OP, municipal specifications, and the OBC); Voluntary Enhanced Targets; and Voluntary Aspirational Targets.



Tools and Incentives

According to the project's Guidelines and Incentives Background Report, Clarington is considering a number of incentives, including planning and/or building permit application fee rebates, the creation of additional Community Improvement Plans to allow for the use of loans and grants, a reduction in parkland dedication requirements or alternative forms of open space for parkland dedication, a recognition program, and allowing an increase in the size of temporary subdivision development signs that could be erected.



Applicant Resources

- Priority Green Clarington website
- Green Development Standards Guidelines and Incentives Background Report

Whitchurch Stouffville: Sustainable Development Guidelines

The Sustainable Development Guidelines are used as a tool for staff to determine and assess the sustainable features of development applications. The Guidelines have been prepared in the form of a checklist that enumerates the various types of project design features that are considered in the evaluation process. The Guidelines are applicable for Plans of Subdivision and site-specific applications, including rezoning and Site Plan, and have been organized into three themes: community design, buildings, and energy and water.



Policy Context and Process

Whitchurch Stouffville's Official Plan (OP) was amended to include policy language that requires completion of a Sustainability Report as part of development application, which demonstrates that new development is carried out in conformity with the OP. In addition, applicants are expected to complete and submit the Sustainable Development Guideline Checklist prior to the Pre-Consultation meeting. The checklist will be discussed at the Pre-Consultation Meeting and based on this review; the applicant will prepare a Sustainability Report addressing the matters identified by staff checking of the "Explanation Required" column on the checklist.



Targets and Requirements

The SDG checklist provides a score to applicants with two levels of performance: minimum required and bonus level, with the caveat that no points can be awarded for building or site features already required by the Ontario Building Code. Each item in the checklist is awarded a point total; depending on the type of development application, point thresholds have been established for "required" and "bonus level." The subdivision design criteria are organized around a series of categories, including community design; energy, water, and waste; and general. The site level design criteria are also related to a number of topics, including site/community design; buildings; energy and water; and general.



Tools and Incentives

If the bonus level target is achieved, applicants may be considered for a bonus in height and density, or other considerations, up to the discretion of staff.



Applicant Resources

- Checklist and associated explanation of items

Brampton, Richmond Hill, and Vaughan: The Sustainability Metrics Program

The Sustainability Metrics program, implemented as part of the review of development applications, has been developed to create a City with a sustainable built form. Together, the Cities of Vaughan and Brampton, and the Town of Richmond Hill, created the Sustainability Metrics as a tool to achieve healthy, complete, sustainable communities. The tool presents users with an overall sustainability score by using a set of Metrics to quantify the sustainability performance of new development projects.



Policy Context and Process

Developers are required to complete their sustainable development guidelines process with their first filing identifying the metrics they chose to implement as part of their development. Developers choose the metrics but they are required to achieve a minimum points threshold (municipality allocates points to each sustainability metric) for their application. Applicants are expected to submit a sustainability score and summary letter with submissions.



Targets and Requirements

Brampton, Richmond Hill, and Vaughan have all instituted three levels of sustainability related to the sustainability score achieved. Brampton and Vaughan have defined these levels as bronze, silver, and gold, whereas Richmond Hill defines them as good, very good, and excellent. Brampton and Vaughan use the metrics program for draft Plan of Subdivision, Site Plan, and block plan applications, whereas Richmond Hill only uses it for draft Plan of Subdivision and Site Plan applications. In all three municipalities, applicants are expected to achieve the base level performance, however defined, for their application to be considered.



Tools and Incentives

While there are no incentives at the municipal level, applicants are encouraged to explore High Performance New Construction (Save on Energy) and Savings by Design Green Building Initiative (Enbridge Gas Distribution) incentives.



Applicant Resources

- Guidebook and Glossary
- Metrics Table
- Sustainability Scoring Tool
- Sustainability Scoring Tool Manual

Mississauga: Green Development Standards - Going Green in Mississauga

The City of Mississauga's Green Development Standards focus on metrics related to stormwater management and flood risk reduction. For this reason, the Standards primarily coalesce around LID measures, including bio-retention, rainwater harvesting, permeable pavement, bioswales, green roofs, and native vegetation. The Standards also advance active transportation guidelines related to walkways, pedestrian comfort, and bicycle parking, and exterior building guidelines related to bird-friendly glazing and site and building lighting. As part of Going Green in Mississauga, applicants are also encouraged to achieve a minimum of LEED Silver certification.



Policy Context and Process

In 2010, Mississauga's City Council adopted the Green Development Strategy, which included a request that development applicants achieve LEED Silver certification for new construction. This request has been codified in the Official Plan; as per policy 9.5.2.10, site development will be encouraged to meet a minimum standard of LEED Silver or adhere to custom green development standards. By way the Green Development Strategy, development applicants are also required to incorporate the Green Development Standards, as appropriate. This requirement is enshrined in the Official Plan through policy 9.5.2.11, which requires site development to incorporate stormwater best management practices, provide enhanced streetscapes, include the use of non-invasive plant material, and minimize the urban heat island effect.



Targets and Requirements

Unlike other standards reviewed in this section, Mississauga does not have a standard-specific checklist. Instead, planning staff lean on existing LEED checklists, or custom, project-specific standards in their determination of the degree to which a proposed site development achieves sustainability.



Tools and Incentives

Mississauga utilizes two primary incentives to drive sustainable outcomes. The Stormwater Credit Program was designed to incent stormwater management practices that benefit the City's Stormwater Management Program. Developers can earn up to a 50% credit depending on performance related to peak flow reduction, water quality treatment, runoff volume reduction, and pollution prevention categories. To qualify, applicants must demonstrate the performance of measures related to these categories by way of engineering reports and drawings. Applicants who demonstrate environmental performance standards or LEED certification that exceeds that required by the Official Plan (i.e. Silver) may also be entitled to height and/or density bonusing through Official Plan policy 19.8.1.

Toronto: Toronto Green Standards

The current version of TGS (version 3), which came into effect in May 2018, requires greater energy efficiency than TGS v2. In Version 3, TGS consists of four performance tiers. Tier 1 is mandatory for all developments, while Tiers 2 - 4 are optional. The various Tiers were established to demonstrate to the building industry the step changes that will be required to drive toward zero emission buildings, a key differentiator between TGS and other sustainability standards. The City of Toronto's Zero Emissions Building Framework describes the various tiers, where Tier 4 compliance is roughly aligned with a Net Zero Ready level of performance.



Policy Context and Process

Toronto's Official Plan contains policy that allows staff to secure sustainable design features, as laid out in policy 5.1.3.3: To help achieve environmentally sustainable development, the City may use subsection 114(5)(2)(iv) and (v) of the City of Toronto Act, 2006 to secure a number of sustainable design features in development that address exterior building and site matters in Tier 1 of the Toronto Green Standard. Applications submitted on or after May 1, 2018 are required to meet Version 3 of the Toronto Green Standard. Tier 1 performance measures must be met, and compliance is reviewed through the planning approval process. Applications pursuing the voluntary Toronto Green Standard Version 3 Development Charge Refund Program must meet the program requirements in addition to Tier 1.



Targets and Requirements

TGS includes 4 tiers or levels of environmental performance across the five categories -air quality, GHG reductions/ resilience, water efficiency/quality, ecological design and solid waste reductions. Tier 1 continues to be mandatory implemented using authorities for 'matters of exterior sustainable design' under section 41 of the Planning Act and the other Tiers are voluntary. To demonstrate compliance, applicants are expected to submit, depending on the tier pursued, the Tier 1 Checklist, Statistics Template, Bird-Friendly Design, Green Roof Statistics, and High-Performance Checklist.



Tools and Incentives

The City incentivizes higher performance through a Development Charges Refund Program. In order to qualify, applicants must complete the High Performance New Construction Checklist for Tier 2, 3 or 4 projects. There is no new tiered financial incentive offered for the higher tiers.



Applicant Resources

- TGS Website

Whitby: Brooklin Urban Design and Sustainable Development Guidelines

The Brooklin Urban Design and Sustainable Development Guidelines were prepared to guide future development within the Brooklin Community. The Guidelines relate to energy efficiency, material choice and waste diversion, bird friendly design, trees, tree canopy, shade, pollinator-friendly design, local food production and urban agriculture, green roofs, water efficiency and stormwater management, and charging stations. The Guidelines are relevant to Comprehensive Block Plan, rezoning, Plan of Subdivision, Condominium Plan, and Site Plan applications.



Policy Context and Process

Whitby's Official Plan requires the preparation of urban design guidelines to support all planning applications that address, among other matters, the massing and scale of buildings, the provision and design of public roads, public meeting places, open spaces and zoning standards (11.5.6.14). Planning and Development Department staff are charged with reviewing all rezoning and Plan of Subdivision/ Condominium applications alongside the Urban Design and Sustainable Development Guidelines.



Targets and Requirements

There are two type of guidelines: those which are mandatory (indicated by 'shall' language) and those which are voluntary (indicated by 'encouraged', 'discouraged', and 'may' language).



Tools and Incentives

Applicants are encouraged to explore a range of available programs and incentives, including Enbridge's Savings by Design Program and IESO's Save on Energy – New Home Construction incentive, as administered through Whitby Hydro.

5.0 THIRD-PARTY RATING SYSTEMS

5.1 THIRD-PARTY SUSTAINABILITY WHOLE COMMUNITY RATING SYSTEMS

5.1.1 Key Takeaways

- LEED-ND and Living Community Challenge are more prescriptive rating systems
- One Planet Living and EcoDistricts are more flexible rating systems
- Some rating systems have more focus on social sustainability (e.g., health, wellness, equity), like One Planet Living and EcoDistricts
- Some rating systems allow self-assessment or use of the tool without certification (One Planet Living)
- One Planet Living and EcoDistricts encourage more innovation and local solutions, compared to LEED-ND and Living Community Challenge
- Some rating systems are more focused on one aspect of sustainability, like health and wellbeing (WELL Community)
- Some rating systems are more focused on engaging policy and decision makers (EcoDistricts)
- Living Community Challenge has leading edge performance standards, in particular for materials and procurement, that can be quite challenging to achieve
- All rating systems reviewed are voluntary third-party rating systems and certification cannot be wholly prescribed by a Municipality

5.1.2 Whole Community Rating Systems Review

One Planet Living

One Planet Living (OPL) is a sustainability framework used to translate sustainable aspirations into reality using ecological footprinting and carbon footprinting as its key indicators. The framework is applicable in communities of any size, but also addresses buildings and site infrastructure within the community. OPL requires annual action plans and progress reports for 20 years, showing progress towards all 10 principles. Importantly, OPL is less prescriptive and more flexible than other ratings systems.

Living Community Challenge

The Living Community Challenge (LCC) is a framework for master planning, design, and construction. It is a tool to create a symbiotic relationship between people and all aspects of the built environment. It has seven areas of focus, called petals, including: Place, Water, Energy, Health & Happiness, Materials, Equity, and Beauty. Similar to OPL, LCC is applicable within communities of any size while also addressing buildings and site infrastructure within the community. Certification is based on actual, rather than modeled or anticipated, performance, which presents challenges given that high performance requirements can be difficult to obtain.

LEED for Neighbourhood Development

LEED for Neighborhood Development (LEED-ND) is a rating and certification system for neighborhood design that combines the principles of smart growth, urbanism and green building. LEED-ND v4 has five areas of focus: Smart Location and Linkage, Neighbourhood Pattern and Design, Green Infrastructure and Buildings, Innovation, and Regional Priority. To qualify for LEED ND certification, a project site must comprise more than 10 acres and more than three buildings. In scenarios where buildings are separately owned, all owners must agree to complete one LEED-ND application together. At least one building is also required to achieve LEED BD+C certification. LEED benefits from international recognition and name familiarity, and many developers and land owners have some degree of familiarity with the system.

WELL Community Standard

The WELL Community Standard will be a district-scale rating system centered exclusively on health and wellness and aims to set a new global benchmark for healthy communities. WELL Community has ten concepts: Air, Water, Nourishment, Light, Fitness, Acoustics, Mind, Thermal, Materials, and Community. The Standard is applicable at the scale of the neighbourhood or community when there is a population of over 500, floor area over 50,000m2, 10 or more buildings, and five or more acres.

EcoDistricts

The EcoDistricts Framework is a roadmap for urban regeneration and community development rooted in a commitment to authentic collaboration and social, economic and ecological innovation. It focuses on the processes and actors around local action for sustainability and does not have prescriptive strategies or metrics that must be demonstrated through the certification process. EcoDistricts has six priorities, including prosperity, health and wellbeing, place, connectivity, living infrastructure, and resource restoration. EcoDistricts is applicable at the scale of the neighbourhood or community, and requires a commitment to equity, resilience and climate protection, and the formation of collaborative governance and an implementation roadmap.

5.2 THIRD-PARTY BUILDING RATING SYSTEMS

5.2.1 Key Takeaways

- All of the rating systems reviewed are prescriptive
- Some are more focused on other aspects of sustainability, aside from energy performance, like health and wellbeing (WELL).
- Some are considered representative of lower performance standards and are easier to achieve (BOMA BEST)
- Living Building Challenge is considered representative of very high-performance rating system, in particular for materials and procurement, that can be quite challenging to achieve
- All rating systems are voluntary, and certification cannot be prescribed by a Municipality

5.2.2 Building Rating Systems Review

LEED Building Design + Construction

Leadership in Energy and Environmental Design (LEED) BD+C is for New Construction and Major Renovations. LEED has the following categories: Sustainable Sites, Water Efficiency, Energy and Atmosphere, Materials and Resources, Indoor Environmental Quality, Location and Transportation, Integrative Process, Innovation, and Regional Priority. LEED BD+C applies to buildings (excluding K-12 educational, retail, data centers, warehouses, hospitality, healthcare, homes), and include high-rise residential of nine stories or more. The rating system is prescriptive, in that projects seeking certification must meet the Minimum Program Requirements and prerequisites, and achieve a minimum of 40 points.

Living Building Challenge

Living Building Challenge (LBC) is considered to be the most rigorous green building certification system in the market today with stringent performance-based standards across seven areas of focus: Site, Water, Energy, Health, Materials, Equity and Beauty. LBC also offers the option to achieve “Petal Certification” for just one of the seven focus areas. LBC can be pursued by all building types (new construction and renewals). LBC requires significant, performance-based outcomes, including 100% net zero energy, 100% net zero water, on-site renewable energy, and 100% recycling/diversion of construction waste.

Passive House

Passive House (Passivhaus) certification system focuses on passive design to optimize the building envelope to maintain heat and lower heating energy consumption. Focus areas include super-insulation, air tightness, high performance windows, efficient heat recovery ventilation, minimizing thermal bridges, source energy limit, and space conditioning criteria. Although applicable to all building time, to date the Passive House system has primarily been pursued by residential buildings, although a slow expansion to larger commercial buildings is underway. The system has prescriptive energy use and air tightness requirements, which can result in high occupant comfort and low energy use.

WELL

WELL measures attributes of buildings that impact occupant health and well-being by focusing at seven factors: air quality, water quality, nourishment, light, fitness, comfort, and mind. The WELL system applies to new and existing buildings as it pertains to design, construction, and operations. The system mandates that a minimum of 90% of floor area is owned and operated the same party, and recertification is required every three years. Although WELL can precipitate improved occupant health and comfort, it is prescriptive, with some inherent difficulty meeting testing requirements, with fees for each attempt.

BOMA BEST

BOMA BEST is a voluntary program that assesses the environmental performance and management of energy, water, waste diversion, site enhancement, emissions and effluents, indoor environment, and environment management system. BOMA is applicable to buildings with commercial uses including offices, open air retail, light industrial, and shopping centres, multi-unit residential, and healthcare facilities. While marketed as an easier to achieve alternative to LEED, BOMA is mostly applicable to existing buildings.

ENERGY STAR for New Homes

ENERGY STAR is a certification system for new homes run by Natural Resources Canada. Certification is completed by a licensed third-party evaluator. A home with this certification meets the energy efficiency requirements of the ENERGY STAR standard. ENERGY STAR is applicable to low-rise residential buildings and homes. In practice, ENERGY STAR buildings are 20% more energy efficient than a home built to code.

ENERGY STAR for Canadian Commercial Buildings

ENERGY STAR for Canadian Commercial Buildings is a certification system for new commercial buildings, also run by Natural Resources Canada. As of 2018, the Government of Canada recognizes commercial and institutional buildings that demonstrate high energy performance with ENERGY STAR's mark of energy efficiency. Eligible buildings now include commercial offices, K-12 schools, hospitals, medical offices, senior care communities and residential care facilities, supermarkets and food stores, and ice and curling rinks.

6.0 TOOLS TO ENABLE - INCENTIVES

6.1 MUNICIPAL TOOLS

- Development charges reduction, exemption, or grants (implemented by the City of Toronto)
  - Municipalities can implement a program of DC reductions, exemptions, or grants to provide a financial incentive to encourage development and redevelopment in central urban areas, designated exemption areas, and brownfields.
- Creation of additional Community Improvement Plans to allow for the use of loans and grants (under consideration by Clarington)
  - Community Improvement Plans (CIPs) stimulate targeted reinvestment, encourage select infill and intensification opportunities, coordinate planning efforts, preserve neighbourhood and heritage character, enhance industrial and business opportunities, and provide incentives for the remediation of contaminated sites. The Town of Whitby currently has a downtown CIP in place, which incentivizes intensification by way of development charge exemptions, cash in lieu parking, and tax increment equivalent grants (TIEG).
- Expedited approval process for exemplary sustainability projects (identified as a possible incentive in the East Gwillimbury Official Plan)
- Increase in density and/or height through Section 37 (implemented by Mississauga; under consideration by Burlington)
- Tax Increment Based Grants (TIBG) (not implemented by the municipalities reviewed in this report)
  - Tax Increment Based Grant is a financing tool for municipal brownfield development that permits the deferral of taxes on an incremental scale to encourage the remediation of sites with various issues and significant financial outlay before new development can occur.

- Reduction in parkland dedication requirements or alternative forms of open space for parkland dedication (under consideration by Clarington)
  - In new developments or redevelopments, developers are required to either set aside a required amount of land for parkland (parkland dedication) or, alternatively, pay cash-in-lieu (CIL) of parkland dedication. The CIL is paid to the municipality prior to the issuance of the first building permit. The Town can choose to allow LID and green infrastructure as part of an applicant's parkland dedication.
- Recognition program, Sustainable Design Awards, linked to Urban Design Awards program (implemented by Pickering; under consideration by Burlington and Clarington)
- Provision of a stormwater credit program (or equivalent) to incent applications to include sustainable stormwater management measures in site design (implemented by Mississauga)

7.0 GUIDING PRINCIPLES - TYING IT TOGETHER

The following guiding principles are predicated on the data collected in this Background Report, coupled with the feedback received at the Phase 1 Update Meeting, held with Town staff on December 18th, 2018. The Guiding Principles are intended to inform the draft sustainability guidelines to be delivered in Phase 2 of the project.

Guiding Principle 1: Define the desired sustainability performance threshold

As noted in Section 1, there is an urgent need to change how we develop communities. We have eleven years to reduce carbon emissions 45% below 2010 levels. Against this backdrop, municipalities have the critical role of encouraging development that is more sustainable than code. However, thresholds assigned to different levels of sustainability need to be defined. Where points-based systems have been implemented in Ontario (e.g. Brampton, Richmond Hill, and Vaughan), three levels of sustainability have been identified, with point ranges assigned to each. In other cases, thresholds are defined as mandatory and voluntary. If this option is chosen, we recommend taking a similar approach to East Gwillimbury whereby applicants must achieve all mandatory requirements, plus addition stretch measures. In either case, defining these thresholds will become particularly relevant as it relates to development incentives, which can be allocated based on the sustainability performance achieved.

Guiding Principle 2: Keep it Simple: Use a Checklist

Checklists allow for transparency, consistency, and ease of application for both the development community and planning staff. The checklist should clearly define mandated criteria while encouraging additional, voluntary measures.

Guiding Principle 3: Prescriptive vs. Performance (or both)

The metrics to be included in the Sustainable Development Guidelines can be prescriptive or performative in nature. A prescriptive-based approach, as embodied by rating systems like LEED, state specific measures, like installing LED lights. Often, prescriptive targets are tied to building codes or other existing legislation. Performance based targets, alternatively, are concerned with measurable or predictable performance outcomes, including energy efficiency or water use, whereby the method to attain these outcomes is not prescribed. Performance based criteria allow for more design flexibility but also require analysis to validate the performance intent has been met. In other words, while flexible, performance criteria are more time intensive to document and confirm the intent has been satisfied. The checklist should provide both prescriptive and performance criteria (where applicable). This will allow for clear criteria for those who are otherwise not experienced or motivated, while performance will allow for design flexibility for those who are already going above and beyond.

Guiding Principle 4: Do Not Reinvent the Wheel

Generally speaking, the metrics and intentions defined in existing third-party systems are well researched, defined and validated. In the case of LEED and BOMA, which have experienced greater uptake by the development industry, these metrics are also well understood. Wherever possible, Whitby should use metrics from these systems instead of inventing their own.

Guiding Principle 5: Enshrine in the Official Plan

While the Whitby Official Plan currently contains language permitting Sustainable Development Guidelines, additional policy will be required to enforce the guidelines in practice. Additionally, in the Town's review and update of Secondary Plans, in particular, the upcoming update of the Downtown Whitby Secondary Plan, language requiring conformity with the Sustainable Development Guidelines could be added.

Guiding Principle 6: Investigate the Incentives

Given the feedback received from the first engagement event (see Appendix A), it is clear that incentives will be an important part of the Sustainable Development Guidelines, noting that potential incentives will be paid for by taxpayers, including development charges, tax increment based grants, or others that require additional staff. The Town could investigate leveraging existing tools to achieve its sustainable ambitions. Chiefly, the Town could use the Sustainable Development Guidelines as a criterion for determining the allocation of financial incentives available through its Downtown Community Improvement Plan. In addition, consideration could be given to granting density and/or height bonuses through Section 37 negotiations in the downtown area. Finally, should the Town consider implementing a stormwater charge program similar to Mississauga's, it could explore the use of incentives to implement sustainable stormwater management practices at the site level, including low impact development and green infrastructure.

In addition to existing incentive tools, we recommend that the Town delineate the top three incentives most likely to be pursued and set aside budget and time to explore the feasibility of implementation. As noted in the December 18th Phase 1 Update meeting, the application of financial incentives will depend on budgetary constraints. Although a development charge program is not feasible today, the infrastructure and timeline for its introduction could be defined to allow for quick adoption when budgetary allowances emerge.

Incentives should be thoroughly investigated for appropriateness of use or implementation within the Town of Whitby, as what works for one Municipality may not work for another. Once these details have been flushed out, any recommended incentives will be referred to the Long Range Financial Plan, Corporate Strategy Plan, Annual Business Plans, and the 2020 Budget Process for consideration.

8.0 NEXT STEPS

This Background Report represents the first phase of the Whitby Sustainable Development Guidelines project. The Report will be used to inform the work to be delivered in Phase 2, including of draft versions of the Sustainable Development Guidelines, Development Review Checklist, training guide, brochure, and Incentive Program Summary Report. These deliverables will also be shaped by feedback captured through a multi-pronged approach to engagement, whereby we will consult with staff from the Town, Region, and Central Lake Ontario Conservation Authority, in addition to the public and development industry. Phase 2 is scheduled to extend from January to September 2019, at which time the draft deliverables will be presented to Council. In Phase 3, scheduled to begin in September 2019, our team will finalize all deliverables and subsequently present them to Council for approval.

APPENDIX A: ENGAGEMENT #1 SUMMARY

On November 20th, 2018, we held our first engagement event with 29 stakeholders from the building and development industry, Central Lake Ontario Conservation Authority, and municipal staff. The intent of this session was to better understand what sustainable practices are already being incorporated into development projects and the opportunities and obstacles related sustainable development in Whitby.



Participants were divided between six tables, where they were asked to answer the following questions:

- What sustainable development practices are you already incorporating into your projects in Whitby?
- What are the biggest opportunities related to sustainable development in Whitby?
- What are the biggest obstacles related to sustainable development in Whitby?

This appendix provides key takeaways an overview of what we heard related to each of these elements.

Key Takeaways

- Many developers are already designing their sites to include sustainable stormwater management and energy efficiency measures.
- Education across all stakeholders is imperative to the success of the Sustainable Development Guidelines.
- The final Sustainable Development Guidelines should be easy to understand and implement in order to both ensure predictability and prevent longer application review periods
- Incentives are important to overcome the perceived additional capital costs related to sustainable measures

Existing Sustainable Practices

While the participants identified a number of sustainable practices are already being explored and implemented in Whitby, those related to energy efficiency and stormwater management emerged most often in discussion. Specific initiatives identified include:

- Energy efficiency practices and technologies included ENERGY STAR appliances, sub-metering and energy use analysis, electric vehicle charging infrastructure, solar panel installation, and geothermal heating and cooling.
- Stormwater management practices were equally prevalent, including the installation of low impact development measures, flood risk assessment and floodplain mapping, and stormwater retrofits.
- Other sustainable initiatives noted by participants include designing for active transportation, transit oriented development, efficient land use, environmentally friendly materials, and managing natural assets.

Opportunities

The opportunities for sustainable initiatives in Whitby, as identified by participants, were far reaching. Building design and construction measures, including green building materials, wood construction, air tightness beyond code requirements, solar panel readiness, and the use of local materials, were identified at all six tables. Equally notable, opportunities for education regarding sustainability were highlighted as an important means to increase awareness and knowledge of municipal staff, the construction industry, and homeowners. Active transportation and transit oriented development were recurring themes, as was the importance of managing and protecting natural features. Finally, the importance of incentives for homeowners and developers was noted as both an opportunity for and obstacle to implementation.

Obstacles

Cost was the most cited obstacle to sustainable development, both as it relates to a lack of incentives and the cost of sustainable materials and construction. As noted by several tables, there is a general sense that these costs both negatively impact housing affordability and have the unintended consequence of slowing down development. Although identified as an opportunity in section 5.2, a lack of education and awareness about sustainable development and technologies was seen as an obstacle by many participants. A lack of awareness was said to manifest across the construction and trade industry, home buyers, development community, and municipal staff. As it relates to the latter, many suggested that the review of development applications will become more cumbersome and less predictable, exacerbating what is already thought to be an inconsistent process. Related obstacles included staffing constraints, delays in application processing due to lack of expertise, and the potential for conflicting comments and directions from departments reviewing applications. Finally, many participants voiced confusion about responsibilities for ongoing maintenance and the ownership of infrastructure following construction.



Attendees

Paige Turchet, SCS Consulting Group Ltd.
Mehr Hazari, Mattamy Homes
Jeff Solly, Tribute Communities
Tim Gallagher, Stantec
Julie Bottos, SCS Consulting Group Ltd.
Mark Greenbaum, The Vogue Development Group
Shawn Mirani, Great Gulf
Mitchell Minniti, Mattamy Homes
Kevin Persaud, Brookfield
Lisa-Beth Bulford, Central Lake Ontario Conservation Authority
Gary Muller, Director of Planning, Durham Region
Carl Pawlowski, Minto
Heather Brooks, Central Lake Ontario Conservation Authority
Mojgan Rasouli, Candevcon
Brian Moss, Heathwood Homes; Brian Moss and Associates
Don Armitrage, Enbridge
Patrick Crosby, Great Gulf
Monica Ruiz, The Municipal Infrastructure Group
Richard Tang, Wealth Power Group
Brian Kelly, Region of Durham
Stacey Hawkins, Durham Region Home Builders Association
Russel White, Fieldgate Development
Steve Edwards, GHD
Sheila Daubeny, Town of Whitby
Russel Mailloux, Aplin Martin
Khoa Ly-Kilis, Signature Communities
Kelvin Kwok, RioCan
Frank Filippo, Brook Valley
Mustafa Ghassan, Delta Urban