

London Green Incentives final report

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The **Planning** Partnership in association with:
Build Green Solutions & TCI Management Consultants Inc.





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1.0 Introduction

Common to all Ontario municipalities is the need to build, reinforce or reshape their planning and development approaches to meet global, regional and local environmental challenges and residents' future needs. As climate change, energy concerns and environmental degradation become better understood, municipalities must focus on action and adaptation as the front-line approval authority for land use decisions and urban development – a major influence on climate change, energy use and environmental quality. Action in this case must focus on development programs which draw on the principles of energy efficiency, renewable and alternative energy sourcing, water efficiency, waste management and the protection of natural heritage resources.

To realize the vision of a more sustainable form of urban development, the City of London will need to engage and empower development interests, businesses and residents to make more sustainable choices. This will be accomplished through an agenda that develops, integrates and delivers incentive programs, alongside more stringent development standards, to assist businesses and residents in reducing their environmental footprint and increase investment in sustainable green building and development practices.

2.0 Purpose

The purpose of this study is to explore the potential for municipal incentives to stimulate green development in the City of London. Undertaken in collaboration with the Ontario Power Authority, this study is intended to establish a preliminary framework for a London-specific Green Development Strategy and identify opportunities for motivate green development in three specific contexts:

1. New Greenfield Development;
2. Urban Redevelopment; and
3. Site/Building-Specific Retrofit.

3.0 What is Green Development?

While sustainability is a broad concept that encompasses social, economic and environmental dimensions, the concept of green development is narrower, focusing on the environmental implications of development (from the community scale to the individual development site to building design).

Discussions on sustainability and green development are often mired in confusion and lack of focus as dialogue drifts between technical discussions on green building technologies, the broad socio-economic implications of development approaches and the environmental consequences/ benefits of sustainable development. This lack of focus is not necessarily a bad thing; it speaks to the rapidly evolving and multi-dimensional nature of the topic, a general lack of understanding of what green development is, and the inherent complexity of sustainable development approaches resulting from the confluence of environmental, economic and social considerations.

While comprehensiveness is an important objective in any policy/program development, simplicity is also an important component that facilitates implementation. By focusing on the elements of green development, the scope of the program can be targeted to a manageable set of goals and objectives, which contribute to the achievement of sustainability in the broader sense.

4.0 Process

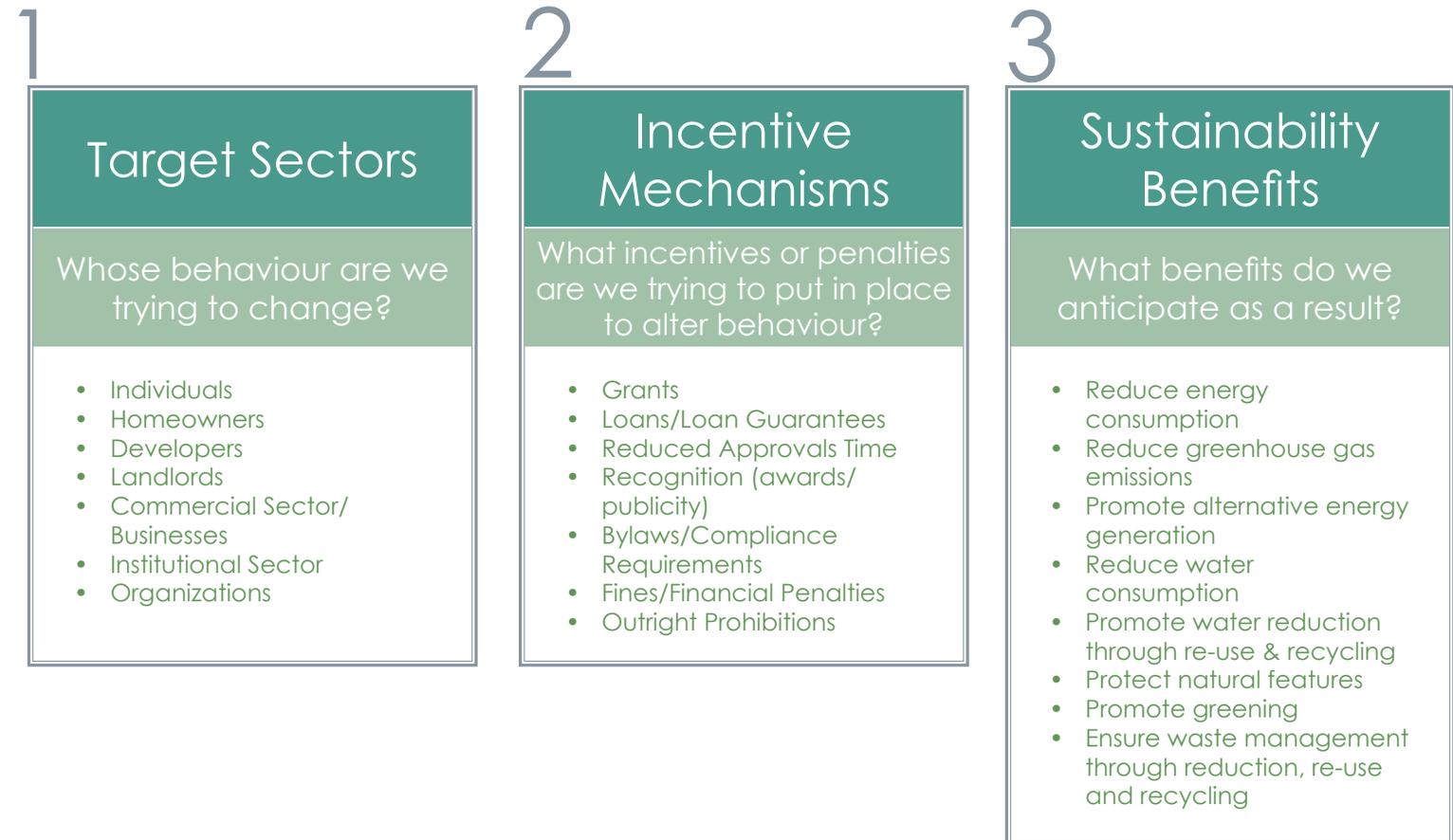
This project is the result of a highly consultative process and included participation by an active stakeholder-focused Steering Committee, which included representation from London's Development and Home Building Industry, local utility operators and a number of municipal departments with direct involvement in the development process.

Augmenting research and analysis of current municipal green development approaches and available tools to incentivize green forms of development, input from the stakeholders was crucial in exploring the possibilities of a comprehensive City-led green development strategy and corresponding incentive program.

The consultation process culminated in a two-day consultation event (July 20 and 21, 2010), which included a public presentation on converging issues in sustainable design, best practices in green development and green incentive program implementation, as well as a series of sector-specific discussion forums designed to identify preferred program approaches, effective incentive mechanisms and potential partnership opportunities in the delivery of green development incentives.

4.1 What We Heard

Based on input from the key stakeholders, the following diagram illustrates the range of possibilities in establishing an incentive-based Green Development Strategy. It highlights the varying target sectors, myriad of incentive mechanisms and potential core benefits that could be addressed through the City's evolving Green Development Strategy.



5.0 Setting the Context

5.1 What is London Doing?

Like many other municipalities, the City of London has been forward thinking in its planning for the environment. Over and above the City's ongoing work to develop a comprehensive Green Development Strategy, which this study is a part of, the following is a summary of some of the City's other ongoing sustainable initiatives:

The Mayor's Sustainable Energy Council

Stemming from a commitment made at the June, 2007 Mayor's Roundtable on Alternative Energy, the Mayor's Sustainable Energy Council (MESC) has been working with local energy experts to promote, encourage and support local research, new technology, and green energy investments, with the aim of advancing London as a leader in sustainability energy initiatives.

One of the major initiatives of the MESC was the launch of the EnergySaver website, which effectively serves as a repository of information on the City's evolving green initiatives and connects local residents and business to information and incentives on green energy programs

To assist in these activities, MSEC launched its EnergySaver website to connect residents and businesses with information on funding programs for residential and commercial-based green retrofit programs and other energy saving strategies (<http://www.msec.london.ca>).

RETHINK Energy London

Through its RETHINK Energy London Initiative, the City has identified a range of potential options for education, incentives (municipal or utility based), and/or regulatory tools that could be used to promote local advancements in green building, and it is seeking input from local utilities, development organizations, other stakeholders, and citizens-at-large on these options." To date, the focus of the initiative has been on residential development, with specific tools available for new and retrofitted homes and apartments.

The initiative has also explored/recommended a range of potential incentive measures with strategic partners that may warrant further consideration/evaluation as the City's implements its comprehensive Green Development Strategy.

LEEP/TAP Program

London was the pilot community for Natural Resources Canada's CanmetENERGY's Local Energy Efficiency Partnership & Technology Adoption Pilot (LEEP/TAP) program. The program is focused on identifying energy efficiency and renewable energy technologies that can be adapted into local residential building practices. In part, due to interest generated by the program, most local homebuilders are now achieving EnergyStar certification as a standard. Based on the program's early work on identifying best practices in energy efficient home construction and energy-related technologies for Ontario home building, the program has initiatives the design and construction of 40 "Discovery Houses" across Ontario, showcasing the homebuilding industry's best green technology and construction practices.

Place-Making Initiative

The City has been extremely active in the promotion of “placemaking” as a key planning and design concept, focused on creating livable and vibrant communities that create a sense of place and support a high quality of life.

Following an extensive consultation process, the City released its Draft Placemaking Guidelines in November 2007, providing broad design direction on all aspects of the public and private realms. A subsequent charrette process, which tested the draft guidelines through the conceptual redesign of the City’s Summerside East community, resulted in a series of recommendations for establishing a formalized framework and implementation tools to support placemaking objectives.

Smart Moves - London 2030 Transportation Master Plan

The City of London is currently in the process of preparing an update to its 2004 Transportation Master Plan (TMP). The new TMP, also known as “Smart Moves”, is intended to identify and assess a range of transportation projects to be carried out across the City over the next 20 years, to 2030.

Responding to the growing understanding of environmental sustainability, rising gas prices and the public health benefits associated with active transportation, “Smart Moves” will establish a strategy that integrates considerations of all modes of transportation (public transit, carpooling, walking and cycling) into a comprehensive transportation network.

The final “Smart Moves” Plan, which will include policy recommendations, identify infrastructure improvements and establish an implementation and phasing strategy, is slated for completion in Fall 2011.

London Hydro and Union Gas Energy Programs

London Hydro - In 2008, London Hydro launched the Energy Retrofit Incentive Program, an initiative sponsored by the provincial government. The purpose of this program was to give incentive to commercial and industrial businesses to conserve energy. London Hydro offered customers \$1 for every \$3 they were willing to put toward investment in energy conservation. The project was deemed highly successful, with total energy saving reaching approximately 25,000 MW hours per year - the equivalent to about a 6,000-ton reduction in carbon dioxide emissions.

Union Gas - Union Gas delivers a variety of commercial/industrial and residential energy saving programs, including incentives for equipment upgrades and purchases, grants to undertake energy efficiency feasibility studies and audits, and the provision of associated educational/awareness programming around energy conservation.

5.2 What Are Other Municipalities Doing?

Essential to developing an effective Green Development Strategy is aligning the elements of the strategy with the political, economic, and institutional circumstances of the municipality. Some municipalities have begun with modest incentive programs, while others have started out with more far-reaching requirements or incentives. A number of locally-initiated green development strategies have evolved over the past few years with municipalities raising their green building standards and strengthening the implementation of those standards. The following outlines three general approaches taken by municipalities in the development of green incentive strategies.

1. **Establish green requirements** – Some municipalities require certain private sector development projects (triggers include building size, type or use) to meet a minimum green building standard established by policy. Others begin with phase-in periods, or start out with more modest green building standards that are incrementally raised over time. Such phasing usually commences with incentive measures that are progressively phased out in concurrence with increased requirements. A requirement-based approach is more effective if the local municipality has adopted a program for all public sector initiatives to follow and leads by example. For example, Caledon requires through its Green Plan that all public buildings must be LEED Silver.

2. **Provide expedited review from green building projects** – Whether expedited review can be an effective incentive depends heavily on the structure and timing of the municipality's existing building review process and the availability of staff resources to ensure significantly faster review for qualified projects. In general it has been found that commercial and large residential projects, which typically undergo a more complex and lengthier review, may offer an opportunity for the largest reductions in processing time. Even a modest reduction can be a significant incentive when the turn-around time is certain. Municipalities can also provide green development projects with a higher level of municipal assistance and coordination throughout the review process, in conjunction with faster processing and reduce application requirements.
3. **Offer direct financial incentives** – Direct financial incentives differ considerably in nature and scope. Grants, tax breaks, and building fee waivers provide the most straightforward benefit to projects, and their use depends largely on the financial resources and programs available to the municipality. Bonus development can also provide a significant financial benefit to private sector products in jurisdictions that are able to integrate the incentive within their existing planning and zoning requirements and processes.

Ontario Case Studies

Overall, with the exception of a limited number of municipalities, examples of direct municipal incentives for green initiatives are somewhat limited. In most circumstances, municipalities are still in the early stages of exploring potential fiscal measures – and their subsequent feasibility – to support specific green initiatives.

Notwithstanding that, there are some notable green incentive programs currently being implemented in Ontario. In terms of their application, while most of the existing municipal programs in Ontario are aimed at smaller-scale interventions at the private household level and are aligned with similar Provincial/Federal programs, there is considerable variation in the approaches that various municipalities have pursued. Toronto, for instance, has focused its efforts on incentivizing green development practices for larger scale commercial/residential developments, while other municipalities such as Caledon and Markham have focused on providing funds to environmental and community groups to advance their green agendas/objectives.

Undoubtedly, learning from the varying approaches used elsewhere in the Province will aid the City of London in establishing the most appropriate avenue to pursue when establishing its own program.

City of Toronto

Toronto Green Standard

The Toronto Green Standard (TGS) is about designing sites and buildings that are more environmentally friendly. The Toronto Green Standard will result in measurable improvements to air and water quality; increased energy and water efficiency and solid waste diversion rates; reduced greenhouse gas emissions; and enhanced ecology and the natural environment. The TGS is a key element of the City's Climate Change Action Plan, an aggressive environmental framework aimed at reducing Toronto's greenhouse gas emissions by 80% by 2050. Developers achieving the voluntary Tier 2 requirements of the TGS are eligible for a 20% Development Charge refund.

Eco-roof Incentive Program (Existing development)

Toronto's Eco-Roof Incentive Program, launched in March of 2009, is designed to promote the use of green and cool roofs on Toronto's existing industrial, commercial and institutional (ICI) buildings, and to help Toronto's business community take action on climate change.

The performance criteria for the Eco-Roof Incentive Program are consistent with the Toronto Green Standard and the Green Roof Construction Standard contained in the Green Roof Bylaw. Green roofs are eligible for a grant of \$50 per square metre up to \$100,000 per project. Cool roofs, which feature a membrane or coating that

reflects the sun's rays, are eligible for \$5 per square metre to a maximum of \$50,000.

Better Buildings Partnership

The City's Better Buildings Partnership (BBP), a program delivered by the Energy Efficiency Office since 1996, assists owners and managers of buildings as they work toward energy efficiency goals, including the new Toronto Green Standard. BBP's New Construction program offers incentives and other resources to support the design and construction of new energy efficient buildings. The BBP program also offers assistance for energy retrofits in existing buildings across the institutional and multifamily sectors. The following incentives are offered under this program:

- **Zero Interest Loans**

Financial backing is the largest barrier to the promotion of energy conservation and green energy projects. The City of Toronto offers a portfolio of Sustainable Energy Funds (SEF) delivering zero interest repayable loans to help overcome that barrier. These zero interest loans are available to building owners in the MASH sector (municipalities, municipal organizations, school boards and publicly-funded academic, health and social service entities, as well as any corporation or entity owned or controlled by one or more of the preceding), and not-for-

profit organizations, as well as private multifamily buildings.

Two zero interest loan funds are currently offered under the Sustainable Energy Funds (SEFs):

1. Toronto Green Energy Fund (\$20 million) for renewable energy projects (available to both new and existing buildings); and,
2. Toronto Energy Conservation Fund (\$42 million) for energy conservation projects (for existing buildings only).

A third fund, the BBP Loan Repayment Reserve Fund (approximately \$8 million) complements SEFs to ensure that as many projects as possible, large and small, can maximize their financing from these loan funds. Each fund can lend up to \$1 million per project, up to 49% of eligible project costs.

- **Gas Equipment Conversion**

One-time incentives are calculated on the basis of the annual projected cubic meter volume of natural gas added to the address at the rate of \$0.05/m³ up to \$30,000 per address. Higher efficiency equipment and systems conversions will qualify for the higher efficiency incentive (Enbridge pre-approval required). Additionally,

\$100 incentive per gas dryer conversion is available. [Delivery Agent: Enbridge Gas Distribution Energy Efficiency Programs]

- **New Building Construction Program (NBCP)**
Enbridge Gas Distribution's New Building Construction program (NBCP) helps offset the costs of designing more energy-efficient buildings for commercial, institutional or multi-family use through incentives of \$0.10/m³ of annual projected natural gas savings up to \$30,000. [Delivery Agent: Enbridge Gas Distribution Energy Efficiency Programs]
- **Commercial Audit Incentive**
Designed to help offset costs in obtaining detailed cost/ benefit analysis in those buildings which have the greatest potential for savings. The Audit provides incentives for applicants whose audit scope is pre-approved by Enbridge and meets its material requirements of Enbridge's Report Outline. Audits focus on HVAC, Control, Energy Consumption and Energy Intensity, Energy and Water Savings and Fuel Conversion. To be eligible for the incentive, the report must materially meet the requirements of Enbridge's "HVAC Building Energy Audit Report Outline". [Delivery Agent: Enbridge Gas Distribution Energy Efficiency Programs]

- **Design Assistance Program**

The program offers a fixed incentive of \$3,000 for design activities aimed at improving a building's energy and environmental performance – whether it is a new building, an addition to an existing building or a major renovation. [Delivery Agent: Enbridge Gas Distribution Energy Efficiency Programs]

Town of East Gwillimbury

Community Energy Plan

The Town of East Gwillimbury has become a recognized leader in promoting green development. In November 2009, the Town released its Community Energy Plan, outlining an array of strategies to promote energy planning, environmental stewardship and sustainability. The primary goal of the Plan is to reduce energy and water use, greenhouse gas emissions and other environmental impacts, while ensuring reliable, affordable energy for its growing population.

The Plan's primary focus is on establishing key objectives and directives related to sustainable energy management. While the Plan does not directly create any new incentive measures (though it encourages the exploration of administering new incentive measures), it

does provide some insights related to the use of incentive programs in the achievement of green development objectives:

- The Plan recommends that East Gwillimbury establish a clearing house of existing Provincial, Federal and private initiatives that provides information, application support, and outreach to ensure that all available incentives are publicized and used.
- The Plan suggests making investment-based incentives aimed at attracting new business conditional on the achievement of the Plan's objectives for energy and water performance. In other words, it is modifying existing incentive tools by adding green development objectives as conditional requirements.

Town of Markham

Markham Environmental Sustainability Fund

The Town of Markham's Environmental Sustainability Fund, provides funding of up to \$10,000 for local sustainable initiatives. The aim of the program is to fund demonstrable, innovative and leading environmental initiatives that contribute to the sustainability and health of Markham's natural environment.

Those eligible for funding under the program include other levels of government, public agencies, school boards, local community groups and other non-profits with affiliation to local community groups. In order to qualify, the proposed initiative must meet at least one of the following three objectives:

1. The project is a leading environmental innovation (i.e. pilot project) that can be showcased by the Town of Markham;
2. The project promotes education, understanding and participation in environmental sustainability in the Town of Markham; and,
3. The project supports the Town's environmental policies and strategic plan.

Calls for funding proposals/applications are release twice per year. Funded projects must be completed within 12 months of receipt of funds and must be documented in a final project report that is submitted to the Town upon completion.

Town of Caledon

Community Green Fund

The Town of Caledon has developed a Community Green Fund focused on supporting local environmental groups. According to its 2009 Environmental Action Report, the fund has delivered approximately \$60,000 since 2006 and has leveraged an additional \$165,000 in provincial, federal and other external financial assistance for these groups.

The City has made a concerted effort to make funds as accessible as possible and the process of applying for as simple as possible for potential homebuilders. Builders are notified of the available grant program every time they apply for a building permit and are paid by the City pending the completion of an application and demonstration of LEED certification.

City of Kitchener

Green Housing Incentive Program

The City of Kitchener in partnership with CREW (Community Renewable Energy Waterloo), a local non-profit, recently launched a new grant program for local homebuilders to build LEED certified homes. The City has committed \$500,000 (funds are provided out of the City's larger \$5 million Local Environmental Action Fund) over three years to provide grants to homebuilders that achieved LEED certification. As an aside, the \$5 million Local Environmental Action Fund was established through revenues generated through the sale of a number of municipal assets. To avoid illegalities of bonussing under the Municipal Act, the funds are administered through the establishment of a Provincially-approved Community Improvement Plan.

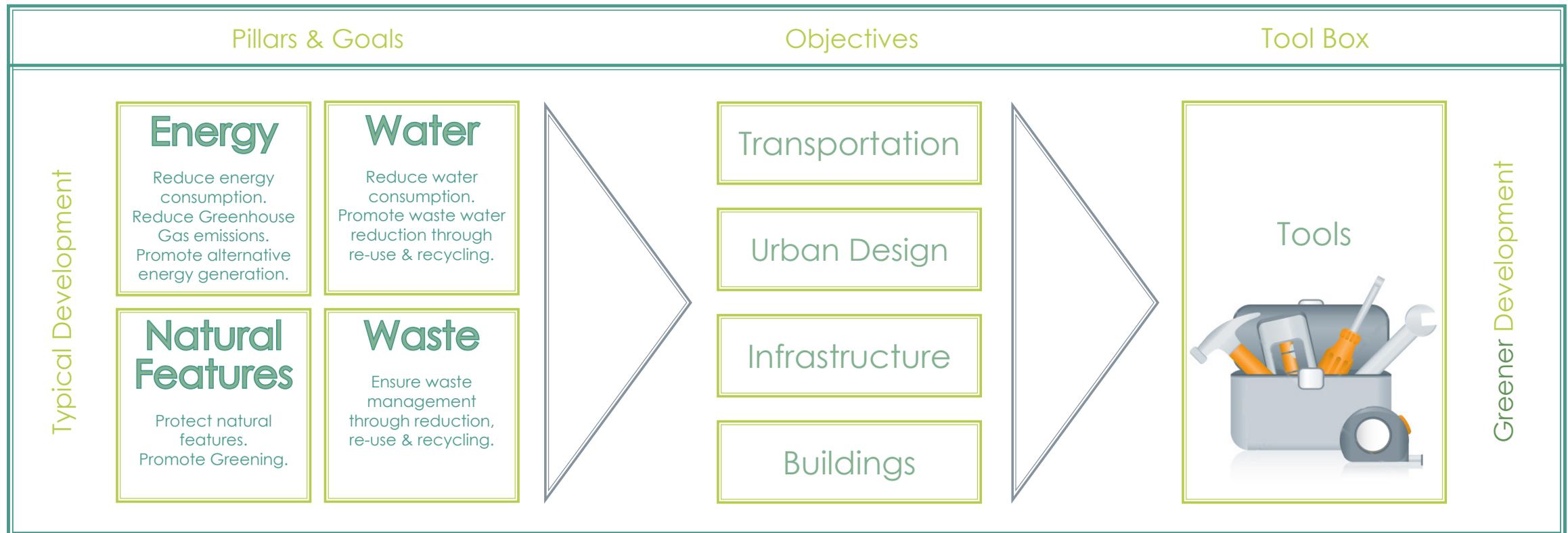


6.0 Establishing a Green Development Framework

The purpose of this chapter is to provide the City of London with some clear guidance as it continues its work in establishing a Green Development Strategy.

The following is a focused, comprehensive and integrated framework that London should pursue as the template for its Green Development Strategy.

Recognizing that further work is required at the City level to refine goals and objectives in order to meet local needs, this proposed framework provides considerable flexibility in order to adjust goals and objectives as local needs change, and as green technologies and development approaches evolve over time.



6.1 The Four Pillars of Green Development

The Green Development Framework is premised on four key pillars of green development:

1. Energy – encompasses energy consumption (i.e. electricity, gas, etc.) and local energy generation (i.e. solar voltaic, wind turbines, etc.)
2. Water – includes water consumption and the impact of development on local water resources
3. Waste – encompasses waste management and diversion approaches used during the development/ construction process and overtime by the users of a particular development project
4. Natural Features and Resources – encompasses the impact of development on the natural environment

These pillars capture the fundamental environmental elements that are influenced or impacted through development decisions and approaches.

6.2 Goals

Under each of the four pillars, the City shall establish a range of broad overarching goals that it wants to achieve through development. These goals are intended to be City-wide in scope and signal the City's primary aspirations for green development. The following are examples of the types of generic goals envisioned:

Energy

- Reduce Energy Consumption
- Reduce Greenhouse Gas Emissions
- Promote Alternative Energy Generation

Water

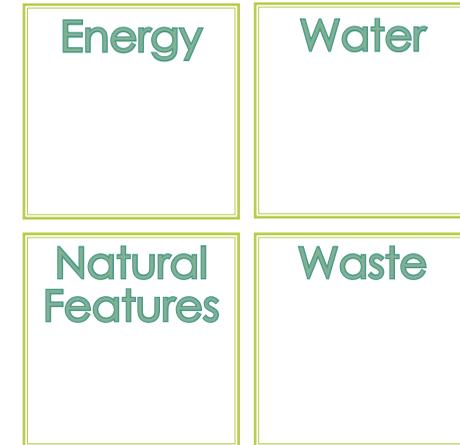
- Reduce water consumption
- Protect water resources
- Promote waste water reduction through water re-use and recycling

Waste

- Ensure waste management through reduction, re-use and recycling

Natural Features and Resources

- Protect natural features and resources
- Promote greening and enhancement of the natural and urban environments



Ultimately, these goals must be developed in consultation with the public and key stakeholders and should be enshrined in the City's Official Plan to set the foundation for implementation.

These goals may change over time to reflect shifting needs and may also be quantified to be more target-oriented. For example, the City could establish a targeted reduction in greenhouse gas emissions (eg. reduce per-capita greenhouse gas emission levels by two-thirds by the year 2031 or divert 70% of solid waste from landfills by 2015).

6.3 Objectives

Moving from the general to the more explicit, the City must establish a series of specific objectives to be achieved through new development projects. Like the overarching goals articulated above, the objectives may also be adjusted over time in accordance with evolving needs and level of achievement.

To ensure clarity and focus, it is recommended that these objectives be categorized under four key headings, which represent four main elements considered through the planning and development process (refer to table for examples):

1. Transportation
2. Urban Design
3. Infrastructure
4. Building Design

Undoubtedly, there are clear synergies between the four pillars and, as such, specific objectives may be the same for one or more of the pillars. While not essential for implementation purposes, the defined objectives could be embedded within the Official Plan if there was a desire on the City's part to do so.

The corresponding matrices provides examples of the types of category-specific objectives that the City may consider as it fleshes out its own green development strategy.

Transportation

Urban Design

Infrastructure

Buildings

6.4 Tools

Tools are the actual mechanisms to achieve the desired objectives. They include a combination of technological and design approaches, investment and policy interventions to influence desired forms of development. With continual advancements in new building technologies and green development techniques, the tools will be subject to constant change. Therefore, the City, in its efforts to promote green development, must be flexible and open to new and innovative tools that contribute to the achievement of its overall goals and objectives.

The corresponding matrices provides examples of the types of tools that the City may consider as it fleshes out its own green development strategy.



Element		Goals	Objectives	Tools
ENERGY	Transportation	Reduce energy consumption.	Promote more transit (reduce the per capita energy consumption for travel).	<ul style="list-style-type: none"> • Build transit. • Establish a municipal fleet and taxi fleet of hybrid or electric vehicles
			Promote energy efficient vehicles / HOV.	<ul style="list-style-type: none"> • Build HOV lanes. • Build energy efficient vehicles infrastructure. • Build priority parking for energy efficient vehicles.
			Promote all modes of transit (cycling, walking, ect.)	<ul style="list-style-type: none"> • Build development that supports residential, employment and services in close proximity.
			Promote mixed use development.	<ul style="list-style-type: none"> • Build development that supports residential, employment and services in close proximity.
		Reduce greenhouse gas emissions.	Promote more transit (transit vehicles and energy efficient transit).	<ul style="list-style-type: none"> • Build transit. • Establish a municipal fleet and taxi fleet of hybrid or electric vehicles
			Promote energy efficient vehicles / HOV.	<ul style="list-style-type: none"> • Build HOV lanes. • Build energy efficient vehicle infrastructure. • Build priority parking for energy efficient vehicles.
			Promote all modes of transit (cycling, walking, ect.)	<ul style="list-style-type: none"> • Build pedestrian and cycle friendly networks/sidewalks, and trails.
			Promote mixed use development.	<ul style="list-style-type: none"> • Build development that supports residential, employment and services in close proximity.
	Promote alternative energy generation.	NA	NA	
	Urban Design	Reduce energy consumption.	Promote communities that maximize energy efficiency through design.	<ul style="list-style-type: none"> • Require denser development and a range of development types (increases the viability of centralized energy provision). • Design for reduced energy demand.
		Reduce greenhouse gas emissions.	Promote communities that maximize energy efficiency through design.	<ul style="list-style-type: none"> • Require denser development and a range of development types (increases the viability of centralized energy provision). • Design for reduced energy demand.
			Promote the design of streets and spaces that endorse alternative transportation.	<ul style="list-style-type: none"> • Build public transit infrastructure. • Build high quality streetscapes that are pedestrian/cycle friendly.
		Promote alternative energy generation.	Design for reduced energy demand and for climate change adaptability.	<ul style="list-style-type: none"> • Build developments that have the flexibility to integrate future low carbon techniques/technologies.

	Element	Goals	Objectives	Tools
ENERGY	Infrastructure	Reduce energy consumption.	Promote land use for district energy.	<ul style="list-style-type: none"> • Build district energy stations.
			Promote the use of low carbon technologies and associated infrastructure.	<ul style="list-style-type: none"> • Build infrastructure to support biomass, wind, hydro, efficient ground/air heat source pumps.
			Promote on-site energy generation.	<ul style="list-style-type: none"> • Build on-site generating facilities for buildings.
			Promote the co-location of potential heat customers and heat suppliers.	<ul style="list-style-type: none"> • Locate heat customers in close proximity to heat suppliers.
			Consider how density and form will affect use and emissions.	<ul style="list-style-type: none"> • Build an integrated network of roads, open and green spaces, and buildings. • Build high-density developments.
		Reduce greenhouse gas emissions.	Promote land use for district energy	<ul style="list-style-type: none"> • Build district energy stations.
			Promote the design of alternative transportation.	<ul style="list-style-type: none"> • Build public transit infrastructure.
			Consider how density and form will affect energy use and emissions.	<ul style="list-style-type: none"> • Build an integrated network of roads, open and green spaces, and buildings.
	Promote alternative energy generation.	Promote other means of generating energy.	<ul style="list-style-type: none"> • Build Bio-mass generating stations/ wind/ hydro/ ground and air heating source pumps. • Build outlets and additional infrastructure to support hybrid or electric vehicles. 	
	Buildings	Reduce energy consumption.	Promote LEED or equivalent of a municipally-defined certification level for new development.	<ul style="list-style-type: none"> • Build to certification level for new development.
			Reduce energy demand through passive design techniques (massing/ daylight/ form).	<ul style="list-style-type: none"> • Build and design buildings, which take advantage of passive design techniques.
			Promote the development of buildings with high quality building fabric.	<ul style="list-style-type: none"> • Build buildings with high quality fabric, insulation, low energy lights and appliances.
			Promote the inclusion of cooling needs.	<ul style="list-style-type: none"> • Build buildings with cooling mechanisms.
			Promote LEED or equivalent of a municipally-defined certification level for building retrofit.	<ul style="list-style-type: none"> • Build to certification level for building retrofit.
Reduce greenhouse gas emissions.		Promote LEED or equivalent of a municipally-defined certification level for new development.	<ul style="list-style-type: none"> • Build to certification level for new development. 	
	Promote LEED or equivalent of a municipally-defined certification level for building retrofit.	<ul style="list-style-type: none"> • Build to certification level for building retrofit. 		

Element		Goals	Objectives	Tools
WATER	Transportation	Reduce water consumption.	NA	NA
		Promote waste water reduction through re-use and recycling.	NA	NA
	Urban Design	Reduce water consumption.	Promote neighbourhood design, which minimizes their affect on water quality and management.	<ul style="list-style-type: none"> • Build neighbourhoods which minimize their affect on water quality and management. • Locate communities and development in areas which will not contaminate potable water resources. • Integrate storm water management facilities and SUDS into new and existing development.
		Promote waste water reduction through re-use and recycling.	Promote protection of potable water resources. Minimize flood risks and impacts and promote good drainage practices.	
	Infrastructure	Reduce water consumption	Promote the design of neighbourhoods where there is no overall increase in total water demand.	<ul style="list-style-type: none"> • Build neighbourhoods where there is no overall increase in total water demand. • Build green roofs, rainwater harvesting facilities, permeable pavements, and protect natural watercourse corridors and wetlands. • Form partnerships and build facilities which reduce water consumption and achieve efficiencies. • Build neighbourhoods where there is no overall increase in total water demand. • Form partnerships and build facilities which reduce water consumption and achieve efficiencies.
			Promote SUDS in the development/ retrofitting of developments.	
			Encourage partnership working with environmental agencies, water companies and other local stakeholders to explore opportunities for reduced consumption and efficiencies.	
		Promote waste water reduction through re-use and recycling.	Promote the design of neighbourhoods where there is no overall increase in total water demand.	
	Buildings	Reduce water consumption.	Promote buildings that maximize opportunities of both water conservation and water efficiency.	<ul style="list-style-type: none"> • Build buildings that maximize water conservation and efficiency. • Offset water demand through retrofitting existing homes and buildings. • Build buildings that re-use and recycle water.
		Promote waste water reduction through re-use and recycling.	Promote building practices and buildings that re-use and recycle water.	

Element		Goals	Objectives	Tools
NATURAL FEATURES	Transportation	Protect Natural Features	NA	NA
		Promote Greening	NA	NA
	Urban Design	Protect Natural Features	Promote design that enhances and protects natural features.	<ul style="list-style-type: none"> • Build developments that enhance and protect natural features. • Work with an Environmental Agency to identify specific areas for protection.
		Promote Greening	Promote design which incorporates a high degree of permeability for wildlife within the built environment.	<ul style="list-style-type: none"> • Build developments that integrates permeability for wildlife into the built environment. • Work with an Environmental Agency to identify specific areas to be developed as green corridors.
			Promote the creation of new green spaces, enhance surrounding ones, and include creative greening approaches within the design.	<ul style="list-style-type: none"> • Build new green spaces and enhance existing ones.
	Infrastructure	Protect Natural Features	<p>Promote the conservation of existing habitats; the creation of new habitats and how these can be programmed along-side new infrastructure development.</p> <p>Promote the development of planned green 'buffers' along with other mitigation measures.</p>	<ul style="list-style-type: none"> • Don't build in environmentally sensitive locations. • Build buildings which accentuate natural features and maintain/enhance these features. • Require planned buffers.
		Promote Greening	Promote a range of new green space assets to be created to compliment existing green infrastructure and fill in gaps.	<ul style="list-style-type: none"> • Build complimentary green infrastructure.
	Buildings	Protect Natural Features	Promote a built environment with a high degree of permeability for wildlife.	<ul style="list-style-type: none"> • Build with consideration for natural corridors and habitat.
			Promote building design which accentuates natural features, and seeks to maintain/ enhance these features.	<ul style="list-style-type: none"> • Don't build in environmentally sensitive areas. • Build buildings which accentuate natural features and maintain/enhance these features.
		Promote Greening	Promote building design which includes specific measures for biodiversity.	<ul style="list-style-type: none"> • Require trees and additional planting in hard-landscaping, living (green) roofs and nesting sites.

Element		Goals	Objectives	Tools
WASTE	Transportation	Ensure waste management through reduction, re-use and recycling.	Promote the reduction of transportation emissions by locating waste facilities close to the source.	<ul style="list-style-type: none"> • Build waste facilities close to the source. • Plan for local civic amenity sits located on regularly used routes so people don't have to make dedicated journeys.
	Urban Design	Ensure waste management through reduction, re-use and recycling.	Promote the use of innovative design technology to store and collect waste.	<ul style="list-style-type: none"> • Build accessible storage facilities.
			Promote opportunities for waste reduction, re-use and recycling.	<ul style="list-style-type: none"> • Incorporate recycling amenities into the design of public spaces, schools, ect.
	Infrastructure	Ensure waste management through reduction, re-use and recycling.	Promote local waste management facilities.	<ul style="list-style-type: none"> • Build waste management facilities of high quality and integrate these into the community. • Build a network that combines waste collection, disposal and planning. (Create waste collection synergies).
			Promote recycling opportunities in the built environment.	<ul style="list-style-type: none"> • Build recycling infrastructure. • Provide more recycling bins in public places.
	Buildings	Ensure waste management through reduction, re-use and recycling.	Consider the full repair and eventual demolition in the selection of construction mechanisms and materials.	<ul style="list-style-type: none"> • Construct and furnish buildings with products to reduce waste. • Provide in-house facilities to store non-recyclable and recyclable waste and compost.
		Promote LEED or equivalents of a municipally-defined certification level for all buildings and retrofitting in regards to waste and materials.	<ul style="list-style-type: none"> • Construct and furnish buildings with products to reduce waste. 	



7.0 Implementation- How to do it?

Experience has shown that there is no single approach that will provide all the necessary strategic and financial assistance for the successful implementation of the City's Green Development Strategies. Therefore, successful realization of the City's objectives will require a combination of actions that maximize their individual potential impacts.

This chapter explores the key considerations in implementing a Green Development Strategy in the City of London.

7.1 Mandatory vs. Optional vs. Incentive-based Approaches

From a very general perspective, implementation strategies manifest themselves in three basic forms:

mandatory

Where specific regulations and guidelines are established and required. This is the most aggressive approach, setting mandatory requirements that must be met through the development process. This approach is sometimes referred to as a "stick".

optional

Where regulations and guidelines are established, and are optional, to be used with discretion by the developer.

incentive-based

Where regulations and guidelines are provided, and compliance is achieved through incentives, usually based on development cost reductions and/or the speed of the approvals process. This approach is sometimes referred to as a "carrot" (or at least removal of impediments and removal of disincentives).

In London, the single most significant barrier to new development innovations is the pace of development. As a result, London has traditionally favoured using a pro "carrot" approach over the establishment of new regulations to spur development activity and minimize potential barriers to desired forms of development.

Given the emergent nature of green development, the increased risks, costs and time associated with pursuing new development approaches and the City's traditional pro "carrot" stance, it is felt that the highest likelihood of implementing a successful Green Development Strategy within the City of London will be using an incentive-based approach.

Currently, the cost of adopting certain advanced green technologies or development approaches (aimed at aggressively reducing levels of energy, water and waster production while effectively lowering greenhouse gas emissions) generally exceeds the fiscal capacities (and willingness), of both industry and private households, for all but a niche market. While the motivations of industry and households may differ, the measures of their fiscal capacities are not dissimilar, both accounting for total upfront capital and operating costs, potential payback and the timing of that payback (on the industry side these measures are translated into achievable rent/price).

In the current context, in order to encourage participation in a green development approach (that almost always involve increased time and costs), there needs to be a reward. While some may argue that doing the "right" thing should be reward in itself, it is unlikely that this would stand up in the competitive high-cost and high-risk market place of community building. While many developers/builders and commercial operators want to do the "right thing" for the environment, they are not prepared to price themselves out of the market without a clear program in mind. This is likewise for households, who need to consider the upfront costs and payback of green technologies. We are still in the early days in understanding and developing green technologies and approaches. Until there is a broader based public acceptance/demand for green development, with greater economies of scale for specific interventions and a more level playing field of mandated policy requirements, the need for incentives remains.

The overall objective in establishing this type of approach is to remove disincentives for Green Development, and to effectively encourage Green Development through the use of incentives. This is an important approach because it must then become the goal of the City to ensure that the incentives are significant enough to promote a private sector response, resulting in greener forms of development.

Notwithstanding the proposed focus on incentives, the City should also explore balancing this strategy with some combination of regulatory and permissive approaches, to establish some reasonable baseline requirements and standards to begin "raising the bar".

It is important to remember that any approach will not reap results over night. However, incentives are helpful in encouraging market transformation. If a complete green development program was mandated, the expectation of achieving green development goals might be high, but realistically the chances of finding support for such a program by the private and public sector are very low. The combination of carrots and sticks is a necessary means of balancing appropriate public standards with innovation and investment from the private sector. As market transformation occurs and new development approaches become more widely accepted, the ratio of carrots to sticks can be adjusted accordingly to cement standard practices and incentivize the next wave of innovation. This is a transition phase, and while imperfect, it lays the groundwork for a degree of acceptance that must be established, as tougher mandatory standards will be needed in the future.

7.2 Evaluating What to Incentivise

In terms of how an incentive program might look, there is general agreement among stakeholders and City administrators that incentives for green development should be result-oriented (performance-based) rather than tied to specific technologies or building approaches. It is argued that an incentive program based on performance-measures is, in the long-term, not only easier to implement and administer, but is also far more flexible and adaptable as technologies and building approaches continually evolve.

A performance-based approach would establish baseline targets, but would not prescribe how those baseline targets would be met, thereby providing development interests the flexibility to explore various technological and/or building approaches. Overtime, based on the City's performance monitoring, the baseline targets could be adjusted accordingly.

Determining what performance thresholds should be incented should be based on the following three considerations:

What is the benefit to the municipality of attaining a certain performance threshold?

In order to provide an incentive for a specific performance threshold, there must be a measurable direct benefit to the municipality. Measuring these benefits is, in part, tied to the establishment of specific targets that the municipality aims to achieve in terms of energy, water, waste diversion, transit ridership and green house gas levels, amongst others factors.

Is achieving the specific performance threshold cost-competitive?

The second consideration is whether or not the means to achieve a specific performance threshold is cost-competitive. The achievement of some targets, while desirable, may prove too costly for a firm and/or household to attain without the assistance provided through incentives. Conversely, the achievement of other targets may be highly cost-competitive and low-risk (cost-efficient to implement with reliable and quick payback), and would require incentive-based encouragement to achieve.

Is the incentive fair and does the municipality intend to be fair?

If it is the municipality's intention to be fair, then it must apply incentives (and mandated requirements) equally. If it is not the intention of a municipality to be fair, and instead favour one form of development over another, then it may wish to apply incentives and mandated requirements accordingly to achieve particular development objectives.

Considered together, these three factors provide a useful basis to determine which performance targets likely warrant incentivization and which do not.

7.3 Types of Incentives

Within the current Provincial planning regime, the City's ability to incentivize a particular form of development is somewhat limited, particularly with respect to the provision of direct grants. Notwithstanding that, the tools that are available can be used effectively to support green development objectives. The four key incentive tools currently available to London include:

Development Charges Reductions or Exemptions

As per the Development Charges Act, rates for Development Charges (DCs) are set based on user types. However, Council has the authority to exempt users/uses from Development Charges to facilitate certain types or forms of development and/or achieve certain development objectives.

Recommendations for exemptions, and their resulting implications from a budgetary perspective, are determined through a DC Study, which is undertaken on a five-year cycle. The City recently completed a full DC Study process, however sustainability initiatives were not considered. The next DC Study is slated for 2014. However, Staff could recommend to Council to trigger an early DC analysis to look specifically at an analysis of exemptions for incentivizing green development.

In order to support any sort of DC-based incentives, the City needs to understand how it will work, what it will cost and devise some projections on the anticipated volume of applications (to aid in cost projections and determining staff requirements).

Direct monetary incentives through the establishment of a Community Improvement Plan

Community Improvement Plans provide the most flexibility for the City to implement financial incentives. The City of London has a history of using CIPs, but to date, has not implemented one to spur on green forms of development.

Developed through a comprehensive public process, and shaped by local needs, priorities and conditions, Community Improvement Plans are a valuable tool to:

- focus public attention on local priorities and municipal initiatives;
- target areas in transition or in need of repair, rehabilitation and redevelopment;
- facilitate and encourage community change in a coordinated manner; and,
- stimulate private sector investment through municipal incentive-based programs.

CIPs are essentially the only effective and legal way to provide direct financial incentives to development interests in order to achieve specific development objectives.

The primary incentive mechanisms availed through a Community Improvement Plan include:

- the provision of direct grants, loans and land under section 28 of the Planning Act; and,

- property tax assistance, including exemptions and/or deferrals, under section 365.1 of the Municipal Act, 2001

Like Kitchener has done with its Local Environmental Action Fund and as London itself has done with its Brownfield Redevelopment Strategy, it is possible to designate the entire City as a Community Improvement Area to incent green development on a City-wide basis.

Height and Density Bonusing

Under Section 37 of the Planning Act, the City may permit additional height and/or density for a use than is otherwise permitted by the zoning by-law in return for the provision of public benefits in the form of capital facilities to be set out in the zoning by-law together with the related increase in height and/or density, subject to the following:

- the capital facilities must bear a reasonable planning relationship to the increase in the height and/or density of a proposed development including, at a minimum, having an appropriate geographic relationship to the development and addressing planning issues associated with the development;
- the development must constitute good planning, be consistent with the objectives and policies of the City's Official Plan, and comply with the built form policies and all applicable neighbourhood protection polices; and,

- the use of Section 37 must be contingent upon adequate infrastructure to support the development.

While intended to facilitate the provision of community services and amenities to accommodate additional population generated by the increased height/density, such as the provision of affordable housing, daycare or streetscape improvements, it is arguable that certain green development approaches could constitute a community benefit. Further work will be required by the City to explore the application, and associated legalities, of utilizing Section 37 to support the provision of specific green technologies or building techniques.

Reductions in Parking Requirements

In accordance with Section 40 of The Planning Act, The City could explore the potential of reducing parking requirements in exchange for specific green development approaches. In many ways, the reduction of parking requirements makes sense in the promotion of green development and will contribute to the desired reduction in automobile use overtime.

Given the current cost associated with building parking spaces, reducing parking requirements and ensuring that the parking supply reflects the true needs of a green community subsequently reduces the overall cost of development and, at the same time, contributes to the achievement of broader sustainability objectives.

Development Charges Considerations

While deferrals or reductions in development charges are unlikely to spur wholesale take-up of green development and design approaches, they can form an important component of a broader suite of incentive tools to help influence development industry decisions about green development.

The Development Charges Act provides municipalities with the legal ability to levy charges against new development to recover the growth-related capital costs of providing municipal infrastructure arising from the service needs of new development. Development Charges are used by many municipalities as one of the prime funding sources of growth-related capital infrastructure.

The Development Charges Act allows municipalities to provide full or partial exemptions for some types developments. In addition, the Act provides the option of implementing area specific by-laws which can be used to impose location-specific development charge rates throughout the municipality. The following are some common practices currently being implemented by other Ontario municipalities:

Development Charge Exemptions – exemptions from the payment of charges within designated area of the municipality, usually in the downtown core or in brownfield sites. The City of London already uses this approach.

Area Specific By-laws and Charges – separate by-laws and rates are established for different areas of the municipality based on the cost of providing specific services in the sub-area of the municipality.

Reduced Rates – development charge by-law provides for reduced rates or full exemptions for certain types of development (i.e. industrial). Many municipalities have adopted this approach.

Alternative Rate Expression – most municipalities levy charges on a per unit basis which does not reflect development location or density. Some municipalities – Mississauga, Markham and Richmond Hill for example – have adopted development rates for certain services, usually storm water management, which are based on the land area of the proposed development.

A concern with adopting these alternative development charge policies is that the municipality may be at risk for not generating sufficient revenues to meet the growth-related capital costs and therefore may result in a property tax or user fee impact. Alternatively, Development Charges could be recalibrated to reflect the true cost based on the availability of services and geography.

Reductions in Parkland Requirements

In accordance with Section 51 of The Planning Act, The City could explore the potential of reducing parkland dedication requirements for green development and/or the acceptance of alternative forms of open space as parkland dedication (i.e allowing green roof space to be included as parkland dedication). Recognizing that public open space is an important element in a vibrant and green community, existing parkland requirements can constitute a significant cost to a proposed development. The cost offsets attained through reductions in parkland dedication requirements could be sufficient enough to incent specific green development approaches. Ultimately, the utilization of parkland reduction to incent green development must balance the overarching needs and objectives of the City.

Development Application Assistance

Recognizing that many of the available incentive mechanisms are relatively complex to administer, assistance with development applications is one of the simplest and quickest forms of incentive to implement. The City could explore a variety of approaches to assist developers/builders committed to green development by streamlining the existing planning and development approvals process. This streamlining could take a combination of forms including:

- Waiving/reducing application fees;
- Waiving/reducing requirements for supporting studies (including adjustments to the definition of a complete application); and,
- Expediting the approvals process for high achievers.

Other Tools

In addition to the above tools, there are a number of other mechanisms that other municipalities have used to influence change. Appendix A presents a comprehensive list of tools that have been used or proposed throughout North America. The list is intended only as a starting point for investigation. A review of any tool's direct applicability and legality within the City of London will require further investigation. All these tools can be implemented in a number of ways, both separately and in conjunction with other tools.

Local Improvement Charges (LICs)

Throughout this process, LICs have garnered particular attention as a potentially effective tool to incent green development.

LICs are a debt instrument used to finance infrastructure improvements and increasingly used to finance improvements in building energy efficiency. The LIC is assessed on property taxes until the cost of improvements have been paid for.

The primary advantage of LIC is that cost of improvements are not borne to the original buyer, but are associated with the property itself. Therefore, the property owner – which may change over time – bears the cost. However, as in any issuance of debt, there are risks, which in the case of LICs, would rest the municipality with potential extension to local School Boards.

Notwithstanding existing limitations in Provincial legislation that limit the types of improvements that can be financed using an LIC, the pursuance of LICs as an effective approach to incent green development should be done with a certain degree of caution.

Ultimately, the City needs to carefully evaluate the risks and whether there is value-added by issuing debt to incent green development. Furthermore, and as in the administration of any municipal financially based programming, the City needs to consider additional staffing needs and the generation of associated costs that must be borne by the City.

7.4 The Key Tenets of Implementation

The City must have the political will to lead the change by creating and enhancing the reasons for businesses and residents to consider green incentives and a desire to assist the private sector by reducing the costs of development and reducing the risks inherent to the planning approval process.

The following is a summary of important actions that the City should consider at the outset of this process:

Establish the vision

A clear and comprehensive vision for the future establishes targets and performance standards and is based on strong policies that support a green incentive program.

Identify champions for change

To ensure success, the City must appoint champions for change, charged with the responsibility to make the incentive process successful. These champions must represent both residential and commercial interests in the community. These champions will ensure that the focus of attention is on benefiting the program rather than looking for problems.

Lead by example

Establishing and promoting this strategy through the day-to-day workings of the municipality will both refine incentives and allow the city to lead this agenda.

An array of approaches and tools will be required

The tools identified in this report present a suite of approaches that can be considered to encourage the development of a green incentive strategy. The types of actions/tools most likely to have the greatest simulative impact still need to be established. Identifying a program, which can be supported by the wider community, will involve public and stakeholder consultation to fully understand and appreciate which approach best represents the interests of this community. Additionally, forging partnerships with local stakeholders, development interests, utility operators and business working will be an essential component of this process, and, as such, should be pursued.

The level of commitment shown by the City will be an important signal to the general public and the development industry that they are serious about achieving green development for London. Also of importance is the recognition that a complex combination of actions and tools will be required in order to achieve measurable success. No action or tool, on its own, will have a sufficient impact on the achievement of a sustainable future envisioned by the City of London. The funding and financing for these actions and tools, and the political will to implement them will be of paramount concern.

Success can be measured incrementally

Measuring the success of establishing an environment for change is primarily an exercise in determining when the City can stop providing incentives to the private sector. In other words, once the market for the desired amount and form of development is firmly established, and critical mass has been achieved.

Success takes commitment, cooperation and time

The process of establishing a successful green incentive strategy is not achieved quickly, or by one single action. It is always a complex combination of actions, players and time. There is no set formula for success. While it is understood that the City must lead, it is also understood that cooperation and coordination among landowners and developers is required to facilitate change - especially change that is tied to a fundamental shift in development.

7.5 Strategy for Success

Experience in other jurisdictions, suggest that the application of the following three fundamental approaches will be key to the implementation and achievement of the objectives of London's Green Development Strategy:

1. Establish the environment for change

A predicate for green development is to establish political will and a broad culture of awareness of the necessity for change. To date, the City has taken the initiative to begin the process, and has strongly voiced its support for green development as a priority. This sends a powerful message. However, the City must continue to lead the way, quickly moving on short-term opportunities and actions, while keeping the long-term goals at the forefront of the public agenda. Local residents, businesses, community groups, landowners and developers should all be intimately involved in all parts of the process.

In the near term, the establishment of a workable Green Development Strategy will set the scene for implementing green incentives to encourage greener forms of development. Other immediate actions are outlined in the "Quick Wins" section that follows.

The longer-term vision for a sustainable London needs to be kept alive as its implementation evolves over time, through the continued advancement of green development approaches and municipal policy/programming innovations over the coming years.

2. Reduce the cost of development

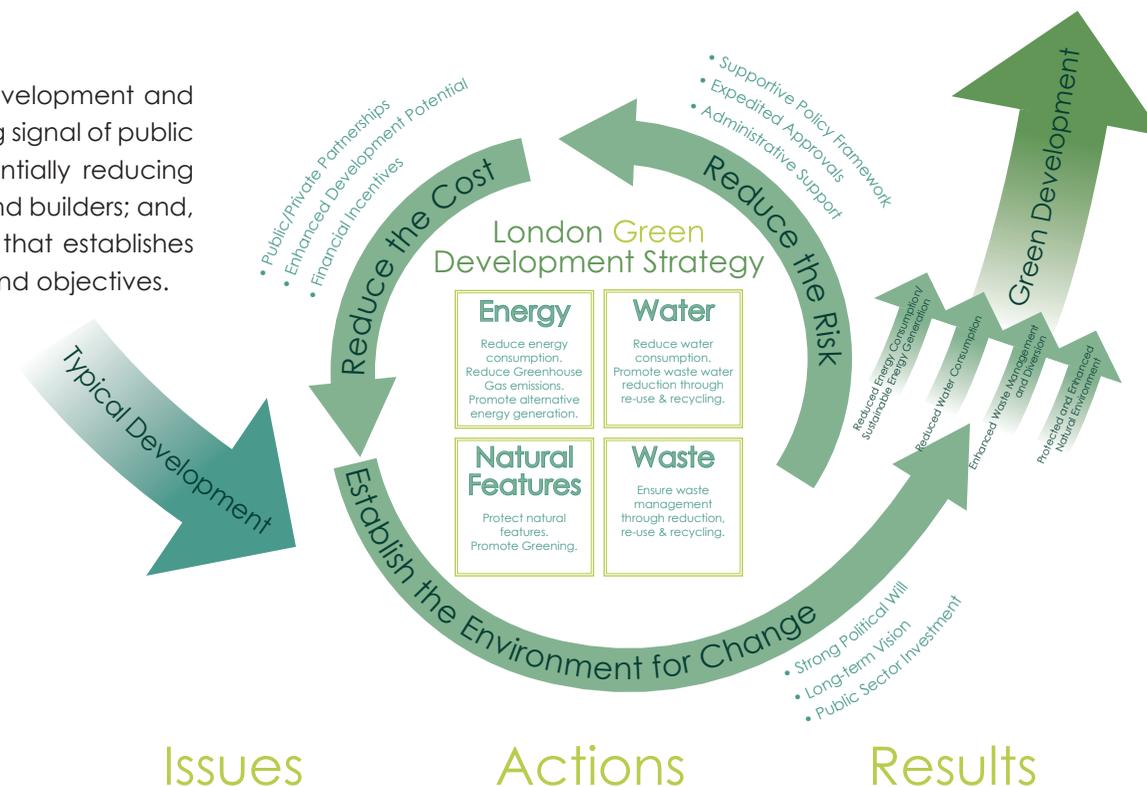
Green building and development is more expensive than traditional development and construction practices. As

has been addressed at great length in this report, in order to facilitate greener development, incentives need to be offered to potential developers. These assist in reducing developer costs and increasing the economic sustainability of investment in innovative and greener forms of development (potential incentive mechanisms were outline in Section 7.3)

3. Reduce the risk of the approvals process

As well as high costs, private developers also face regulatory risks. In order to reduce risk and increase attractiveness to developers, the City should establish an environment of certainty. This could include:

- Municipal investment in green development and infrastructure, which sends a strong signal of public sector intent and thereby substantially reducing the risk to "pioneer" developers and builders; and,
- Enhanced policy framework that that establishes clear green development goals and objectives.



7.6 Monitoring and Measuring Success

Evaluation is an important component for the continued advancement of a Green Development Strategy and to ensure that the City's resources are being used effectively to achieve its fundamental green development goals.

In essence, monitoring and measuring the success of establishing the environment for change is primarily an exercise in determining when the City can stop providing incentives to the private sector. In other words, once the market for the desired form of development is firmly established, incentives are no longer needed.

While quantitative measures will be dependent on the City's establishment of target-oriented goals and objectives, numerous examples of implementable measures are readily available. In fact, the City's continued interest in a Energy

Mapping exercise could be an effective tool to monitor and measure the impact of associated green development incentives.

Notwithstanding, quantitative measures will not tell the full story of success. Qualitative measures, such as the quality of the pedestrian environment, the interface between urbanized and natural areas and overall urban design, are also important in determining the overall success of a comprehensive green development agenda. These items are more difficult to measure. At any rate, the City will need to establish a monitoring program to measure the level of influence and success of the various programs (whether they be capital improvements or financial incentives) that are put in place to establish the environment for change over time.

8.0 Recommendations and Priority Actions

Over and above the refinement and implementation of the Green Development Strategy Framework and associated incentive mechanisms, the following are key recommendations and priority actions that the City should consider as it advances its overall green development agenda.

1. **Commit Staff Resources** – Clearly more work is required to refine the Green Development Strategy Framework and establish targeted incentive mechanisms to support green development activity. The City should assign committed staff to coordinate interdepartmental efforts to articulate the City's green development priorities and objectives, define green development targets and verify best value incentives.
2. **Initiate Demonstrations Project(s)** – Building on the growing interest within the local development industry to utilize new green building techniques, the City should explore a potential partnership with a local developer (or consortium of developers) to undertake a demonstration project(s) for the purposes of testing the preliminary strategy and analyzing the need to adjust the rigidity of objectives and the level of incentivization required. Additional recommendations for undertaking Demonstration Projects are described in Section 9.0.
3. **Recognize Innovation** – The City should make a concerted effort to formally recognize local innovation in green development. This recognition should take

the form of an awards program that celebrates creativity and success in the completion of green development projects. The green development awards could be a stand-alone program or form a sub-component of the City's established Urban Design Awards program.

4. **Promote Education** – Green building and development is still a relatively new concept that is experiencing rapid changes in thinking, building technologies and development practices. At the same time, the promotion of green development has wide-reaching implications on land use planning, municipal infrastructure, and municipal finances. In order ensure that the City stays ahead of the curve the City should promote education internally with relevant departments and externally with key stakeholders and the wider public. For example, interdepartmental learning modules could be organized to develop new programs and enhance integrated program delivery, while external consultation events could centre on raising awareness about new initiatives and programs.
5. **Disseminate Information** – Given the emergent nature of green development and the vast number of incentive programs being touted by all levels of government and utility companies, there is a degree of confusion in the market-place as to program availability and requirements to access funds. The City should consider establishing a single-window information source that disseminates information on

government and utility-based incentives available to London residents, businesses and developers. In many ways, the existing Mayor's Sustainable Energy Council EnergySaver website already serves this purpose and could form the basis for a more extensive information resource to facilitate access to available green development programs. This sort of information repository could be further enhanced with dedicated staff to assist development interests in identifying the most appropriate programs for a particular development proposal and completing associated application requirements. London Hydro indicated through the consultation process it would consider providing funds to train a dedicated staff person to oversee such an initiative.

6. **Foster Partnerships to Avoid Program Duplication and Enhance Incentive Potential** – There is little value in implementing incentive measures if someone else is already delivering them effectively. This study was originally premised on exploring opportunities within three development contexts: new greenfield development; urban redevelopment; and, site/building specific retrofits.

Local utility operators provide an array of incentive programs to homeowners, building operators, and developers, that focus on retrofitting existing buildings, which improves building efficiencies and reduces long-term building operating costs. Therefore, it is recommended that the City instead focus its own efforts on greenfield development and

urban redevelopment opportunities rather than duplicate retrofit programs already being addressed through the utility companies. Notwithstanding that, it must be recognized that the local utilities are an important partner in achieving the City's green development goals. As a result, the City and the utility operators should make efforts to ensure cross-promotion of their respective incentive programming to maximize program uptake and leverage the potential synergies of their respective program capacities.

9.0 Demonstration Projects - Rationale and Recommendations

The following section outlines a recommended plan of action for initiating demonstration projects to test and evaluate the cost, uptake and resulting benefits associated with municipal incentives for green development.

Costs and Benefits of Going Green

The cost premiums associated with developing green are difficult to quantify and vary widely depending on the approaches used and the degree of “green” sought/achieved.

Likewise, precisely quantifying the benefits of green development is also difficult.

As a result, determining the appropriate level of incentivization that provides enough cost offset to encourage green development, while reflecting the benefits afforded to the City and the developer, is somewhat challenging.

Hence, the initiation of pilot projects is an immensely useful exercise that allows the City to give potential green development incentives a trial run prior to rolling out a City-wide green development incentive program.

Costs - In 2003, California's Sustainable Building Task Force – a group representing more than 40 state government agencies – commissioned a study to look at the fiscal costs and benefits associated with green buildings. Analyzing the financial inputs/outputs of over 30 LEED certified projects and relying on an extensive

review of other literature and studies, The Costs and Financial Benefits of Green Buildings has become one of the most cited sources on the fiscal impacts (costs/benefits) of green development.

The study concluded that the average cost premium – measured by comparing costing of green buildings against the costing of conventional designs for those same buildings – was about 2%, but ranged anywhere from under 1% for LEED Bronze buildings up to 6.5% for LEED Platinum buildings.

Recognizing that construction costs have fluctuated and building technologies and development approaches have evolved since the study was released, informal discussions with builders and developers in Ontario reveal that those cost premiums are still relatively accurate, estimated at between 2% and 5%, depending on how green the resulting development is.

In addition, while the cost premiums in the Sustainable Building Task Force's study reflected individual building construction, rough estimates suggest that green development at the wider community scale is likely subject to similar premiums.

In simplified terms, assuming an average residential construction cost of between \$150 and \$200 per square foot, the additional premium of going green could equate to anywhere from about \$3.00 to \$10.00 per square or from about \$3,600 to \$12,000 for a 1,200 square foot residential unit.

Benefits - On the benefit side, there a number – both

in terms of direct savings and less direct qualitative gains, with different benefits afforded to various beneficiaries – municipalities, developers and end users (residential and non-residential). The following is a summary of some of the key benefits stemming from green development.

Municipalities – From the municipal perspective, the benefits of supporting green development include: potential property value increases, which in turn can enhance property tax base; reduced demands on municipal infrastructure and services; improved air and environmental quality; and, improved community health. All of these potential benefits can positively influence local economic development and competitiveness.

Developers – From the developer perspective, while there are premiums associated with green development, benefits include: potential marketing opportunities and enhanced consumer/industry recognition, which can in turn have a positive influence on sales/rents.

End Users (Residential) – From the viewpoint of residential end users, benefits of green development include: energy and utility savings (reduced operating costs); increased property values; reduced maintenance costs and improved indoor air quality and health.

End Users (Non-Residential) – From the perspective of commercial end users, potential benefits of green

development include: energy and utility savings (reduced operating costs); increased property values; improved employee productivity (associated with improved indoor environmental conditions); marketing benefits and increased sales/rents.

The bottom line is that while costs of green development are greater than conventional development, the potential benefits – financial or otherwise – are far reaching and can have positive community-wide spin-offs.

Demonstration Projects - Recommendations:

Recommendation 1: Define Demonstration Project Scope/Location

The City should undertake two demonstration projects, one in a suburban/greenfield context and the other in an urban context to test particular incentive mechanisms and demonstrate/quantify both the costs of developing green and the resulting benefits to the City, developers and end users of the development(s).

Urban Demonstration Project –

Based on input from City Staff, the McCormick Area – which is currently the subject of a City-initiated Area Study – should be the urban test case of the green development incentives. Located within the urban growth boundary, the McCormick Area is an older industrial area surrounded by stable neighbourhoods. With its sizeable inventory of vacant lands and industrial buildings, it has considerable redevelopment potential. The City is currently evaluating land use options

to explore the Area's redevelopment potential, including opportunities for mixed-use residential development.

Greenfield Demonstration Project –

No specific site/area has been selected. Instead, the City should select a demonstration project through a competitive RFP process that sets out key selection criteria. At a minimum, selection criteria should include:

- Development size – minimum proposed development of 300 residential units with a mixed-use component;
- Designation and Location – subject lands be designated for development and located within the urban growth boundary;
- Developer Commitment – demonstrated commitment by proponents to pursue development in a timely manner and implement green development/design approaches and technologies on a community-wide scale.

Recommendation 2: Establish Baseline Green Development Targets

In terms of the City's green development objectives, incentives should support both the achievement of green buildings that demonstrate compliance with LEED or equivalent ratings as well as community-wide design and development approaches that demonstrate achievement of the goals and objectives articulated in Section 6 of this report, to the satisfaction of the City.

Recommendation 3: Define Green Development Incentive Package

As per Section 7.3 and Appendix of this report, there are a variety of incentive mechanisms that could be used to incent green development. For the purposes of these demonstration projects, and based on discussions with City Staff, it is recommended that the City test only a select set of incentive mechanisms to simplify program delivery and control costs. As such, the following core incentive mechanisms are recommended:

Reduction in Development Charges

Based on the simplified cost analysis undertaken earlier in this section and considering current Development Charge Rates (including both DCs for City Services and Urban Works), proportional rate reductions could sufficiently offset any cost premiums associated with green development.

Given that residential Development Charges are applied on a per unit basis and non-residential Development Charges (Commercial/Institutional) are applied on the basis of gross floor area, the following reductions are recommended for the purposes of the demonstration projects:

Residential – 50% reduction calculated on a per unit basis.

Non-Residential – 2% to 5% reduction in Development Charges calculated on a per square metre basis.

Reduced Parking Requirements

As articulated earlier in this report, reduced parking standards not only reduce development costs, but also are consistent with broader green development objectives, specifically the desire to support developments that are less reliant on automobiles and more supportive of alternative and active forms of transportation.

The particular reductions in parking should be context appropriate and consider factors such as access to transit as well as use-specific parking requirements.

Planning Process Assistance

Given the pioneering nature of these demonstration projects, the City should provide additional staff assistance to help guide participating developers/builders through the planning process as well as reduce or exempt participating developers from basic planning application fees.

Other Tools

While property tax rebates or other direct financial incentives could be used either in place of, or in tandem with reduced Development Charges, the City must recognize that the intent of incentives is to influence change, not pay for it entirely. Furthermore, the City must also recognize that there are inherent long-term cost savings associated with going green, so offsetting the entire cost premiums of green forms of development is not necessary or cost efficient.

Recommendation 4: Establish a Monitoring Framework

Evaluation and monitoring is important to ensure that the local incentive mechanisms are effective in achieving fundamental green development goals and objectives.

As a new and relatively untested program, the City, as part of the Demonstration Project process, should establish a monitoring framework to evaluate applicants are responding to incentives and whether desired results in terms of green development are being achieved.

Monitoring efforts should, at minimum, include:

- short questionnaires to developers on their experience to implement green development and design approaches and working with the City to meet incentive program requirements;
- internal tracking of the timing of development approvals and incentive delivery; and
- follow-up reviews of completed developments that have received incentive assistance.

10.0 Concluding Observations

Ultimately, to ensure success, London's green incentive strategy must be shaped by local needs, priorities and circumstances. A comprehensive Green Development Strategy for London needs examine the options, barriers, costs and benefits of certain incentive/regulatory approaches and their impact and applicability to the City. This strategic plan lays the early foundations for the growth and development of the City's green development program by identifying both local and international green incentive programs, focusing on best practices, lessons learned, and subsequent applicability to London, while recognizing the opportunities and limits proffered under current legislation.



Appendix A: Incentive Mechanisms



Planning Policy	
Implement Community Improvement Project Areas	<ul style="list-style-type: none"> • Establish principles for change required for implementation of financial incentives • A tool to focus/prioritize municipal investment • Provide financial assistance for green developments • Use incentive based planning process where the qualification criteria is based on achieving green performance standards • Primary responsibility with Local municipality
Streamline Approval Process for Green Development	<ul style="list-style-type: none"> • Reduce administrative requirements and timeframe for approvals • More careful consideration by OMB prior to hearing (frivolous and vexations appeals) • Municipality to do environmental and associated studies in advance of development • Responsibility with Local and Regional municipalities
Bonus Provisions for Height and Density	<ul style="list-style-type: none"> • Negotiation tool to achieve planning objectives • Concept must be included in Official Plan • Primary responsibility with Local municipality
Implement Development Permit Regime	<ul style="list-style-type: none"> • Administrative approvals improve certainty in process • Combines zoning and site plan approval • Delegates to administrative function only • Primary responsibility with local municipality

Financial Incentives (Public and Private)

Local Improvement Charges (LIC)	<ul style="list-style-type: none"> • Debt instrument used to finance infrastructure improvements and increasingly used to finance improvements in building energy efficiency. The LIC is assessed on property taxes until the cost of improvements have been paid for. • Advantage of LIC is that cost of improvements are not borne to the original buyer, but are associated with the property itself. Therefore, the property owner – which may change over time – bears the cost. • Primary responsibility with Local and Regional municipalities with approval from Province and potential extension to School Boards.
Tax Increment Equivalent Grants and loans (aka TIF)	<ul style="list-style-type: none"> • In the U.S, municipalities create a TIF district and can freeze taxes at a certain level. • Increases in taxes, resulting from new development, can be diverted to provide financial incentives to promote further development. • Ontario legislation does not allow for the creation of TIF's, however, some municipalities have created similar 'zones' under S. 28 of the Planning Act • Education component of property tax for increment financing is in use in Ontario • Primary responsibility with Local and Regional municipalities with approval from Province and potential extension to School Boards.
Tax Rebates/Waiving Tax Arrears	<ul style="list-style-type: none"> • Property tax rebates can be considered for those types of development that are consistent with municipal objectives in green development • Contaminated lands often have tax arrears that preclude sale – waiving tax arrears can facilitate development • Primary responsibility with Local and Regional municipalities with potential extension to School Boards.
Municipal Redevelopment Grant	<ul style="list-style-type: none"> • A direct grant from municipality for redevelopment that coincide with objectives can be provided with recognition that future taxes or indirect benefits will justify grant • Primary responsibility with Local and Regional municipality
Council Grants and Loans	<ul style="list-style-type: none"> • Council must set aside a sufficient amount either at the onset or on an annual basis to fund the program - loans may be preferential to provide for a revolving fund for future loans and are usually interest free or below market rates • Primary responsibility with Local and Regional municipalities
Tax Exempt Bonds	<ul style="list-style-type: none"> • A debt instrument that provides a cheap source of financing for a community development/ project • Interest income is exempt from federal and provincial taxes • Responsibility with local and regional government with private sector finance enticed through federal and provincial tax exemptions
Funding of Market Feasibility Studies	<ul style="list-style-type: none"> • Municipality provide a grant towards a development feasibility study to encourage development in a certain area of the municipality

Development Charges and Other Fees	
Development Charges - Full or Partial Exemptions	<ul style="list-style-type: none"> • Reduction or elimination of development charges for defined green developments • Responsibility with local and regional municipalities with Provincial government consultation
Exemption, Refund or Reduction of Planning Fees	<ul style="list-style-type: none"> • Waiving or reduction of various planning and development related fees: building permit fees, application fees and cash-in-lieu parkland dedication and cash -in-lieu parking • Responsibility with local and regional municipalities and school boards.
Taxation and Charges	
Property Taxes	<ul style="list-style-type: none"> • Alternative approaches within the existing property tax regime that might serve to encourage green development and help define incentives • Remove education and social costs from property taxes to income tax and ensure government spending is distributed accordingly • Responsibility with Provincial government and Municipal governments
Gas Taxation	<ul style="list-style-type: none"> • Capture portion of gas tax for provision of green incentive strategy • Responsibility with Provincial and Federal government
User Fees and Charges	<ul style="list-style-type: none"> • User fees and charges can be used more extensively to better align benefit from services can be provided green development incentives • Primary responsibility with Provincial government.
Other Tools	
Private and Public Relations	<ul style="list-style-type: none"> • Openly communicate and promote the benefits of green development • Primarily a Provincial government responsibility with Municipal government promotion.
Public-Private-Partnerships (PPP)	<ul style="list-style-type: none"> • A whole range of public private partnerships can be established to begin and promote desired green development incentives • Responsibilities are among multiple stakeholders
Energy Efficient Mortgages	<ul style="list-style-type: none"> • Much like the concept of Location Efficient Mortgages, Energy Efficient Mortgages could provide favorable lending terms for green residential development. Individuals that are purchasing energy efficient buildings in urban areas will have reduced energy-related and transportation-related costs, resulting in lower debt-to-income ratios. In turn, participating financial institutions could provide more favorable lending terms and thereby support green development choices. • Responsibility is primarily with private sector with government advocacy of issues • Much like the concept of Location Efficient Mortgages, Energy Efficient Mortgages could provide favorable lending terms for green residential development. Individuals that are purchasing energy efficient buildings in urban areas will have reduced energy-related and transportation-related costs, resulting in lower debt-to-income ratios. In turn, participating financial institutions could provide more favorable lending terms and thereby support green development choices. • Responsibility is primarily with private sector with government advocacy of issues.