



COMMITTEE OF THE WHOLE COUNCIL

DEVELOPMENT & LEGAL SERVICES

MOVED BY

DATE : October 1, 2007

BE IT RESOLVED THAT Development and Legal Services, Building and Planning Branch Report 2007-57, dated October 1, 2007, regarding Leadership in Energy and Environmental Design (LEED) for New Construction and Major Renovations, Canada (NC), be received;

THAT Council receive Enermodal Engineering Ltd. report “An Implementation Strategy for the Town of East Gwillimbury LEED Policy”, dated July 10, 2007, attached as Appendix 1;

THAT Council modify its current LEED policy to adopt, in principle, a set of policies to be implemented through the Site Plan Review process, as outlined in Appendix 3;

THAT the policy outlined in Appendix 3 be subject to further consultation with stakeholders as staff investigate the implementation of LEED Complete, LEED for Existing Buildings (EB), LEED for Commercial Interiors (CI), LEED for Core and Shell (CS), and LEED for Neighbourhood Development (ND), as part of the Official Plan (OP) review;

THAT staff report back to Council in November with the final recommendations for the Town’s LEED policy;

THAT, in the interim, staff review and Council consideration of development applications will be based on the policies outlined in Appendix 3;

THAT Council support staff and industry training and education to facilitate the implementation of the Town’s policies, including the LEED Accredited Professional (AP) program;

THAT a copy of this Report be forwarded to the Town of East Gwillimbury Developer Group and BILD (Building Industry and Land Development – formerly UDI) for further discussion regarding the implementation policy in particular with respect to its impact on large manufacturing uses;

THAT a copy of this report be forwarded to the Regional Municipality of York.

- CARRIED
- DEFEATED
- TIED (LOST)

Councillor J. Hauseman, Chair



Town of
East Gwillimbury

DEVELOPMENT AND LEGAL SERVICES REPORT 2007-57

To: Committee of the Whole Council
(Development and Legal Services)

Date: October 1, 2007

Subject: Leadership in Energy and Environmental Design (LEED) for New Construction
and Major Renovations, Canada Version 1.0
Corporate Policy Implementation

Origin: Development and Legal Services
Planning Branch and Building Branch

RECOMMENDATIONS

1. **THAT** Development and Legal Services, Building and Planning Branch Report 2007-57, dated October 1, 2007, regarding Leadership in Energy and Environmental Design (LEED) for New Construction and Major Renovations, Canada (NC), be received;
2. **THAT** Council receive Enermodal Engineering Ltd. report "An Implementation Strategy for the Town of East Gwillimbury LEED Policy", dated July 10, 2007, attached as Appendix 1;
3. **THAT** Council modify its current LEED policy to adopt, in principle, a set of policies to be implemented through the Site Plan Review process, as outlined in Appendix 3;
4. **THAT** the policy outlined in Appendix 3 be subject to further consultation with stakeholders as staff investigate the implementation of LEED Complete, LEED for Existing Buildings (EB), LEED for Commercial Interiors (CI), LEED for Core and Shell (CS), and LEED for Neighbourhood Development (ND), as part of the Official Plan (OP) review;
5. **THAT** staff report back to Council in November with the final recommendations for the Town's LEED policy;
6. **THAT**, in the interim, staff review and Council consideration of development applications will be based on the policies outlined in Appendix 3;
7. **THAT** Council support staff and industry training and education to facilitate the implementation of the Town's policies, including the LEED Accredited Professional (AP) program;
8. **THAT** a copy of this Report be forwarded to the Town of East Gwillimbury Developer Group and BILD (Building Industry and Land Development – formerly UDI) for further discussion regarding the implementation policy in particular with respect to its impact on large manufacturing uses;
9. **THAT** a copy of this report be forwarded to the Regional Municipality of York.

PURPOSE

The purpose of this report is to provide Council with recommendations concerning the Town's Leadership in Energy and Environmental Design (LEED) policy and provide additional information regarding a Corporate Policy Implementation Strategy for LEED standards in the Town of East Gwillimbury. These standards will be utilized for new public buildings, as well as new private buildings of Industrial, Commercial, Institutional and High-rise Residential use.

BACKGROUND

In April 2006, Council adopted Planning Report P2006-24 which established Energy Star accreditation as a minimum standard for all new residential development requiring Subdivision or Site Plan Agreements within the Town. This policy initiative was adopted as an initial step in establishing higher environmental standards for development in the Town.

In September 2006, Council adopted Development and Legal Services Report 2006-16, which established LEED-NC Canada Version 1.0 "Silver" certification as a minimum standard for all new industrial, commercial, institutional and residential high-rise buildings requiring site plan or subdivision approvals (see *Appendix 6*). Staff were directed to further investigate LEED rating systems. Enermodal Engineering Ltd. was retained in March 2007 to assist with the implementation aspects of the policy and have submitted a proposed implementation strategy for the Town's LEED policy (see *Appendix 1*).

Planning Act

In January 2007 Bill 51, the *Planning and Conservation Land Statute Law Amendment Act* came into effect. It created new planning tools, giving municipalities the ability to regulate and plan for more aspects of building design. Of particular note are new provisions under Section 41 (Site Plan Control) which allow municipalities to consider energy efficiency and sustainability as a Site Plan consideration. The Town's LEED policy objective is consistent with this direction.

DISCUSSION AND ANALYSIS

Green Building Rating System (LEED, Green Globes, etc)

LEED-NC for New Construction and Major Renovations is a well-recognized and widely accepted rating system in Canada and the United States. The LEED program looks at the complete design of the project from site selection through to commissioning of the project, including matters involved in the engineering and site planning for the project.

LEED consists of an explicit set of environmental performance criteria organized into five performance categories: Sustainable Sites, Water Efficiency, Energy and Atmosphere, Materials and Resources, and Indoor Environmental Quality. A sixth category, Innovation and Design

process, rewards exceptional environmental performance or innovation over and above what is explicitly covered in the basic LEED credits via additional credit options.

Implementation of components of these performance categories award LEED points to the overall building program and toward a level of LEED certification. Projects earn one or more points (maximum of 70 possible points) toward certification by meeting or exceeding each credit's technical requirements. Each point generally represents an integrated building design element that aims to create a building that will improve occupant well-being, and improve environmental performance and economic returns of buildings using established innovative practices, standards and technologies. All prerequisites (of which there are 7 in total) of each performance category must be achieved in order to qualify for certification. Points add up to a final score that relates to one of four possible levels of certification:

- LEED Certified – 26 to 32 points
- LEED Silver – 33 to 38 points
- LEED Gold – 39 to 51 points
- LEED Platinum – 52 to 70 points

Green Globes, an online assessment tool, is also another green building rating system that was considered while reviewing the Town's sustainable development policies. Green Globes consists of seven areas of building environmental performance, including: Project Management, Site, Energy, Water, Resources, Indoor Environment, and Emissions and other Impacts. Similar to the LEED system, points are assigned for certain building features or setting general performance targets. Green Globes has five levels of achievement ranging from one to five Green Globes. The Green Globes system can be self-administered, but official certification requires engaging a third party to verify the design.

It is recommended that the Town continue to use LEED as the basis for its new green building policies. The use of an existing rating system will provide the Town with a proven method of assessing project applications in relation to the policy, as well as create a standardized format on which to base the Town's policy.

Although Green Globes covers many of the same topics as LEED, its specificity and level of rigour in documentation is much less than that of the LEED system. Enermodal noted in their report, that Green Globes is generally viewed as a system that offers some good green design guidance, but is insufficient to assess the overall environmental impacts of a building project.

LEED offers many advantages over other green building rating systems, such as Green Globes. While it is recognized that LEED has limitations, it provides the best existing framework when evaluated against the Town's key goals and objectives. Therefore, it is recommended that the LEED rating system be used as the basis for the Town's green building policy to be directed at employment buildings and multiple residential buildings.

The LEED Policy for East Gwillimbury

A number of regions, municipalities, and other governmental agencies have adopted a policy that new construction by public bodies shall at a minimum meet the LEED certification level of “Silver”. This level of certification tends to significantly improve the overall building design, performance, occupant comfort, etc. with an acceptable increase in capital costs. Therefore, all new Town of East Gwillimbury facilities will be constructed to meet LEED-NC Canada Version 1.0 certification level “Silver”.

In addition to the LEED prerequisites, staff are recommending that 20 credits be made mandatory for all projects within the Town of East Gwillimbury. These mandatory credits speak to some of the Town’s key goals, which include:

- Reducing ecological impacts
- Minimizing negative environmental impacts (such as air quality)
- Providing healthy, safe and comfortable indoor environments
- Enhancing long-term economic returns
- Strengthening community connections

The remaining LEED points are considered ‘discretionary.’ Please refer to *Appendix 2* for a proposed LEED scorecard that illustrates the prerequisites, mandatory credits and discretionary credits for projects within the Town of East Gwillimbury.

Based on further investigation, information from Enermodal, and staff’s experience with current projects in the Town, it was noted that the cost of LEED-NC “Silver” (as a percentage of total construction costs) is rather high for small buildings. Staff recommend that a tiered system based on size thresholds be implemented and that a set of less onerous requirements be considered for smaller buildings. It is proposed that all new industrial, commercial, and institutional buildings with less than 600m² (6500ft²) of gross floor area will be required to meet the LEED-NC prerequisites and the Town’s designated EG standards, which are based on the Town’s mandatory LEED credits (see *Appendix 5*). Formal LEED certification will not be mandated; however, documentation of compliance should be submitted in accordance with LEED submittal format to the Town for review. Buildings with a gross floor area between 600m² and 1200m² (13000ft²) will be required to meet LEED-NC “Certified” standards, including all mandatory Town credits. Buildings with a gross floor area greater than 1200m² will be required to meet LEED-NC certification level “Silver,” including all mandatory Town credits (see *Appendix 3*).

With respect to multiple-storey, apartment-style residential construction, all new buildings will be required to meet LEED “Silver” standards, including all mandatory Town credits. Staff will monitor and review this policy and as the industry becomes more accustomed to building “green,” it may be more appropriate in the future to mandate higher levels of LEED, particularly

with respect to high density residential buildings. The proposed policy approach is outlined on Appendix 3.

LEED design and LEED-implemented construction methods generally have costs in excess of a regularly designed and built building. Enermodal has advised that costs associated with LEED place a premium of between 4% and 7% over regular construction practices when building to the “Silver” certification level, depending on the size and use of the building. The additional incremental costs of achieving LEED certification increases as the size of the project decreases and therefore, the costs of LEED are more difficult for smaller buildings to absorb. An increase to either a “Gold” or “Platinum” certification level results in a slightly higher percentage of cost increase. The modifications to the Town’s LEED policy that staff are recommending at this time deal only with a sliding scale based on the size of the structure.

Incentives and Rewards for Green Building Performance

To help promote sustainable development, the Region of York adopted a policy on June 21, 2007 (see *Appendix 4*) that would provide a 20-35% increase in servicing allocation for development proposals that meet the following criteria:

- Significant water conservation is achieved;
- Location is served by Viva rapid transit or other major YRT, GO and TTC operated transit routes;
- Site is within a Regional Centre or Corridor, or Local Centre;
- Buildings meets Region Transit-Oriented Development (TOD) guidelines;
- Three stream waste reduction is incorporated into the building; and
- A minimum of LEED “Silver” certification is achieved.

Regional staff are currently working in consultation with local municipalities to establish an implementation strategy for this recently adopted incentive policy. It is important to note that the required policy initiative is focused on high density mixed uses developed within the Region Centres such as Markham Centre. It is Town staff’s observation that the construction of LEED certified projects in the Town’s employment corridors will help reduce water consumption generally and as such, the consideration of servicing allocation credits should be explored to help reward green building performance. This matter will be reviewed in more detail with the Region of York. Town staff will also explore the potential for Development Charge (DC) rebates and other incentives for projects that exceed the mandated requirements of the LEED policy.

LEED buildings significantly lower operating and maintenance costs, and these financial benefits are realized during the life of the building. In an environment where energy, water and sewer rates continue to rise, LEED initiatives will continue to play an important role in lowering operating and maintenance costs.

Implementation Strategy

As noted in September 2006, the implementation of the Town's LEED requirements requires industry support and alterations to the Town's requirements for the Site Plan or Subdivision approval process and related Development Agreements.

a) Site Plan Process

Currently, all non-residential and multiple residential developments in the Town are subject to the Site Plan Control provisions of the Planning Act and are subject to the Town's LEED (NC) policy. It is proposed that the Site Plan approval process will require the applicant to retain the services of a LEED-Accredited Professional (AP) consultant to orchestrate the design process, review the construction and certify the completed project. The Town will receive appropriate documentation from the consultant ensuring LEED standards are adhered to during the various phases of design and construction. Key submittals (such as site drawings, stormwater management reports, etc.) will be reviewed by staff to help track each project and improve the chances of a successful LEED certification. It would be beneficial to have Town staff trained to have some expertise in the area of green building standards, more specifically the LEED-AP program.

As recommended by Enermodal, during the initial start-up period, an external review process (involving third-party consultation) should be implemented to assist Town staff with submissions from ICI buildings less than 600m² (6500ft²) who would be exempt from the CaGBC process, until dedicated internal personnel have gained sufficient experience. For all other ICI projects, the Town will rely on the third-party verification process used by the CaGBC for the LEED program.

b) Securities

The Town's policy would require a separate LEED security to be calculated and incorporated into the letter of credit required as part of the Site Plan or Subdivision approval process, in order to ensure the appropriate LEED certification is obtained. As with all other securities associated with development agreements, final amounts are negotiated between Staff and the proponent. As a baseline policy to advance discussions on the amount of securities, Staff are recommending that the LEED letter of credit be based on the calculation of \$5 per square foot up to maximum of \$500,000. The LEED securities obtained from each applicant will be incrementally released. Half will be released once the applicant provides proof of applying for certification from the CaGBC by supplying a copy of the application submitted to the CaGBC. This will be mandated within 6 months of the issuance of an occupancy permit. The remaining portion will then be released upon receipt of confirmation that the project has received the appropriate LEED certification from the CaGBC, which should be provided within one year of occupancy (see *Appendix 3*).

INDUSTRY AND PUBLIC CONSULTATION

No public consultation is required at this time. However, as previously initiated with the Energy Star program, the Town's Communications Branch may co-ordinate a public education and media release program educating the industry and residents about the Town's corporate LEED policy and implementation strategy.

An Employment Corridors Developer Meeting was held on Friday, August 3rd, 2007 to consult with developers on the proposed LEED implementation policy and request comments and input. To date, staff have only received comments from Metrus Development Inc, which are attached as *Appendix 7*. One area of concern is the requirement for LEED-related securities. Staff are of the opinion that specific provisions, including the posting of securities, will assist in ensuring that the project reaches certification by the CaGBC. Staff will continue to address concerns through future research and ongoing consultation.

Staff also met with some representatives from BILD (formally known as UDI) to discuss the proposed implementation strategy and the matter of green building standards. Generally speaking, industry feedback has been consistent in terms of a reluctance to support mandatory requirements in favor of a voluntary approach to delivering green buildings. In addition, there has been a consistent comment that LEED accreditation is more difficult and costly to achieve for industrial and manufacturing buildings relative to commercial and high density residential.

Town staff have also been consulting with a few of the current project proponents, to understand their position on the proposed LEED implementation policy. Through our review and discussion process, concerns have been expressed relating to the feasibility of imposing LEED standards on very specific uses, such as pure manufacturing. Staff are still of the opinion, however, that basic environmental benefits could be achieved through appropriate design measures, which would be in keeping with the Town's environmental objectives.

As set out in the recommendation, staff proposes that the implementation strategy outlined in this report be adopted as an interim approach to implementing Council's policy pending the Official Plan review process. Town staff will continue to research and monitor industry feedback, trends and best practices as part of the on going process. It is recommended that this report be circulated to the key stakeholder groups in the Town including BILD and the East Gwillimbury Developer Group.

FINANCIAL IMPLICATIONS

Staff secured funding from the South Lake Community Futures Development Corporation (SLCFDC), in order to retain Enermodal Engineering Ltd. to assist Town staff in refining the Town's LEED policy and establishing an appropriate implementation process.

With the implementation of LEED-certified development, it is anticipated that Town staff will have to spend more time on development applications subject to the Town's LEED policy, as additional submittals and checklists will be mandated within the site plan application process. Plan reviews and inspections will also require additional time on behalf of the Town's building inspectors. This issue will be addressed through the third phase of the planning application fees review scheduled for early 2008.

An external review process during the initial start-up period would involve the Town retaining third-party consultants to provide peer-reviews of required LEED submittals. The peer-review would be calculated at the applicant's expense and included within the Letter of Credit.

CONFORMITY WITH THE STRATEGIC PLAN

This report and the policy initiative is consistent with the Town's Strategic Plan. Specifically, Pillars One (Protecting and Enhancing the Environment) and Three (Investing in Municipal Infrastructure) of the Strategic Plan are being addressed.

The Town's LEED policy also aligns with the objectives of the Town's *Thinking Green!* Strategy by helping contribute to the establishment of more sustainable communities.

CONCLUSION

LEED for Commercial Interiors (CI) and various LEED initiatives that are currently in pilot form, such as LEED for Existing Buildings (EB), LEED for Core and Shell (CS), LEED Complete and LEED for Neighbourhood Development (ND), may be applicable to the Town of East Gwillimbury as they mature from pilot projects and further research will be conducted by Town staff. The Town's LEED policy will be subject to ongoing monitoring and may be subject to future refinements, based on different types of uses.

Staff will continue to investigate other forms of LEED which offer improved opportunities for the Town's various new growth areas. It is recommended that further initiatives be explored by staff and that the Town incorporates such research and policy development into the Town's Official Plan review.

ATTACHMENTS

- Appendix 1: An Implementation Strategy for the Town of East Gwillimbury LEED® Policy Report from Enermodal Engineering Ltd.
- Appendix 2: Proposed Town of East Gwillimbury LEED-NC Scorecard
- Appendix 3: Proposed Town of East Gwillimbury LEED-NC Implementation Policy Table
- Appendix 4: York Region's Incentive Policy for Sustainable Development through LEED® (excerpt from June 21, 2007 Regional Council report)
- Appendix 5: Proposed EG Green Buildings Smaller than 600m² Checklist
- Appendix 6: Committee of the Whole Council Resolution – September 5, 2006
- Appendix 7: Comments received from Metrus

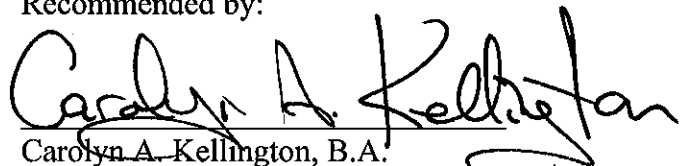
This Report has been reviewed by the senior management team.

Prepared by:



Robin Skinner, B.E.S.
Environmental Planner

Recommended by:



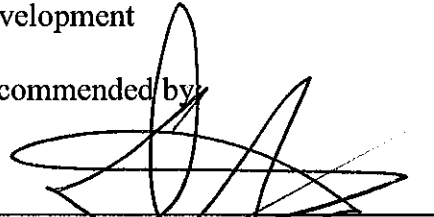
Carolyn A. Kellington, B.A.
Manager of Community Planning &
Development

Recommended by:



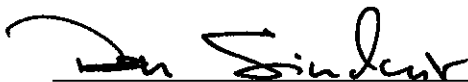
Tim Gibson, Chief Building Official
Director of Building Approvals & Inspections

Recommended by:



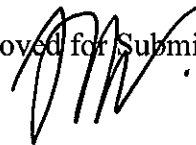
Dan Stone, MCIP, RPR
Manager of Policy Planning

Submitted by:



Don Sinclair, General Manager
Development & Legal Services

Approved for Submission:



Thomas R. Webster,
Chief Administrative Officer

Encl. (October 2007)

**An Implementation Strategy
for the Town of East Gwillimbury LEED® Policy**

Final Report

July 10, 2007

Prepared for:



Town of
East Gwillimbury

**19000 Leslie Street
Sharon, Ontario, Canada L0G 1V0
Phone: 905-478-4282 Fax: 905-478-8545
Internet: www.eastgwillimbury.ca**

Prepared by:



**Enermodal Engineering Ltd.
650 Riverbend Drive
Kitchener, Ontario, Canada N2K 3S2
Phone: 519-743-8777
Fax: 519-743-8778
Internet: www.enermodal.com**

APPENDIX 1

Preface

This report is the result of an integrated consultation process initiated by the Town of East Gwillimbury with Enermodal Engineering Ltd. The findings and recommendations contained herein have been developed to assist the Town in implementing a meaningful and effective LEED® (or, more generally, "green building") policy that specifically addresses the issues and challenges of importance to East Gwillimbury.

The overall direction of the implementation strategy was established by a team of Town staff including: Don Sinclair (General Manager, Development & Legal Services Department), Dan Stone (Manager of Policy Planning), Carolyn Kellington (Manager of Community Planning & Development), Tim Gibson (Director of Building Approvals and Inspections/Chief Building Official), Chris Cannon (Planner) and Robin Skinner (Environmental Planner). Enermodal helped refine and clarify the details of the strategy by generating a series of recommendations for the development of an *implementation framework* and an *implementation process*. These recommendations are based on our experience as the LEED® Consultant on over 100 projects pursuing LEED® certification.

While we believe the recommendations in this report form a solid basis for the Town's LEED® Policy, we strongly advise a strategy of continuous monitoring and improvement. Some flexibility and adaptation will undoubtedly be necessary in implementing a policy of this nature – particularly due to the many variations in details and circumstances that occur from project to project.

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Executive Summary

The Town of East Gwillimbury has initiated a LEED® (or, more generally, "green building") Policy for all new buildings constructed within Town limits. The Policy is intended to help reduce ecological impacts associated with development; provide healthy, safe and comfortable indoor environments; enhance long-term economic returns; and strengthen community connections. This report proposes recommendations for a strategy to implement the Policy.

LEED® (which stands for Leadership in Energy and Environmental Design) is the leading 'green building' rating system in North America. It offers a standardized methodology for assessing the environmental performance of buildings in five key areas: sustainable site issues, water efficiency, energy efficiency, materials selection, and indoor environmental quality. Four levels of performance are recognized: Certified, Silver, Gold and Platinum. LEED was chosen over other rating systems (such as Green Globes) based on it being a more comprehensive system with specific and quantifiable performance requirements.

The Policy mandates LEED® Canada-NC "Silver" certification for most buildings. A set of mandatory credits has been established to further promote and achieve the goals of the Town. Alternate compliance paths have been recommended for buildings under 1200 m². A scorecard has been established as a living document used to monitor a project's status.

A list of submittals and progress documentation has been established for major project milestones to allow the Town to monitor the status of each project. To further monitor compliance, it is recommended that the Town perform monthly site visits.

No direct penalties or rewards will be associated with the Policy. It is recommended that a security be held by the Town, as part of the site plan agreement, to help enforce compliance with the process. Furthermore, it is recommended that the amount of this security be commensurate with the average incremental cost of achieving LEED 'Silver' certification (an amount in the range of \$8 to \$12 per square foot).

The implementation of a Town-wide LEED Policy will require a certain establishment period. It is recommended that dedicated personnel from the Town be assigned to manage the LEED Policy and monitor projects. During the initial "start-up" period, an external review process (involving third-party consultation) should be implemented to assist the Town until dedicated internal personnel have gained sufficient experience.

1 Introduction

1.1 Background

In September 2006, East Gwillimbury Town Council passed a resolution adopting a Municipal policy directing all new Town facilities and new industrial, commercial, institutional and multi-unit residential buildings within the municipality to be built to LEED® Canada-NC "Silver" certification level. This same policy also requires all major renovation projects for industrial, commercial, institutional and high rise residential buildings to meet LEED® Canada-NC certification level "Silver" as of January, 2010.

Adopting the LEED® Policy was an important step in fostering social, economic and ecological sustainability within East Gwillimbury. It is a tangible extension of the Town's Strategic Plan and reinforces the vision, core purpose and values of the municipality.

LEED® (which stands for Leadership in Energy and Environmental Design) has emerged as the most widely-used and well-respected "green" building rating system in North America with over 6000 registered projects. Its purpose is to help define what constitutes "green" (as it relates to buildings) and to establish a common standard by which to judge green building performance. LEED® (along with most other green building rating systems) takes a holistic view of building performance across a broad spectrum of underlying issues including land use, water consumption, energy consumption, materials selection and indoor environmental quality. LEED® is a registered trademark licensed for the exclusive use of the Canada Green Building Council (CaGBC).

The popularity of LEED® is a direct result of the growing consensus that green buildings are a crucial response to many of the persistent and increasing threats to our environment including climate change, pollution, resource depletion, and inappropriate land use. Green buildings generate hope for a sustainable future and offer numerous practical benefits including:

- Lower operation and maintenance costs
- Safer and healthier indoor environments
- Increased employee productivity
- Enhanced building value
- "Future Proofing" against diminishing resources

An Implementation Strategy for the Town of East Gwillimbury LEED® Policy

- Reduced liability
- Improved corporate image

With the adoption of the LEED® Policy, East Gwillimbury has taken a leadership role in promoting green buildings and their associated benefits. The next step for the Town is to make the Policy operational by creating an implementation strategy.

1.2 Purpose

The main purpose of this report is to offer recommendations about how to create an effective implementation strategy for the East Gwillimbury LEED® Policy. Our approach is threefold:

1. To formally set the direction of the strategy
2. To define the recommended implementation framework
3. To establish the recommended implementation process

1.3 Scope

This report offers recommendations concerning the technical aspects of implementing the East Gwillimbury LEED® Policy. No guidance is offered or implied concerning legal issues and/or authority to enforce compliance.

This report addresses new industrial, commercial, institutional and multi-unit residential buildings. Major renovations would be handled in a similar fashion.

Implementing a green policy for other building categories such as existing buildings, neighborhood developments, or single-family homes requires an entirely different approach that is beyond the scope of this study.

2 Setting Direction

2.1 Overview

The first step in the development of the implementation strategy for the Town of East Gwillimbury LEED® Policy was to identify and highlight the key drivers (or themes) that formed the rationale for the Policy in the first place.

An Implementation Strategy for the Town of East Gwillimbury LEED® Policy

These drivers, which are summarized in Section 2.2, are the fundamental basis for the Policy and were used as a guide throughout the development of the implementation strategy.

The next step was to formalize the general objectives for the implementation strategy. These objectives further refine the overall direction of the strategy and are summarized in Section 2.3.

2.2 Key Drivers

The drivers of key importance to the Town are summarized as follows (in no particular order):

1. Reducing Ecological Impacts
2. Providing Healthy, Safe and Comfortable Indoor Environments
3. Enhancing Long-Term Economic Returns
4. Strengthening Community Connections

2.3 General Objectives

The following general objectives were identified to further refine the development of the implementation strategy:

Meaningful Improvements: The strategy shall directly respond to the aforementioned set of 'key drivers' and shall achieve performance improvements that are significant relative to standard building practice.

Measurable Improvements: The strategy shall focus on improvements in performance that are measurable such that tangible results are achieved.

Clarity: To minimize vagueness and ambiguity, the strategy shall focus on defining a clear, well-defined framework and establishing a consistent, streamlined implementation process.

Completeness: The strategy shall influence all phases of a building project including design, construction and operation and shall endeavor to account for the full spectrum of considerations involved in a building project.

Performance-Based Requirements: To encourage innovative and cost-effective solutions, the strategy shall focus on using flexible, performance-based approaches to define requirements (where possible) rather than using rigid prescriptive requirements.

Appropriate Application of Requirements: The strategy shall recognize that each building is unique and shall include provisions, as necessary, to accommodate buildings of various types, sizes, and locations.

Affordability: The strategy shall recognize that many of the green features and practices encouraged by the Policy result in increased capital costs and shall set realistic and affordable targets.

Ease of Administration: The strategy shall recognize that it will place an additional strain on Town resources and shall be developed to minimize additional administration costs to the extent possible, without compromising the integrity of the strategy and its goals.

Adaptability: The strategy shall recognize that the key drivers and the green building industry are constantly evolving and shall adapt as necessary to changing circumstances.

3 Defining the Implementation Framework

3.1 Overview

Before delving into details, it is important to acknowledge and appreciate the importance of using some type of green building 'rating system' as the basis for the implementation framework. In order to avoid unsubstantiated claims (i.e. greenwashing), a good rating system defines the benchmarks, requirements, assessment methodologies, established standards, and calculations that are needed to get meaningful and measurable results. In addition, third party verification (i.e. certification) is essential. Without this, there can be no confidence that the desired performance criteria are being achieved.

Much work has gone into creating frameworks to assess the performance of industrial, commercial, institutional and high-rise residential green buildings. The two most well known systems in Canada are LEED® and Green Globes (note: these systems are summarized in Section 3.2). Other systems have been used, but they are either obsolete or of minor importance and not worthy of consideration at this time. Similarly, new standards are under development (such as ASHRAE Standard 189), but these are not yet available for use, and have therefore not been considered.

The use of an existing rating system will provide the Town with a proven method of assessing project applications to determine compliance with the Policy. This will provide consistency in the approval process and allow it to be streamlined. In addition, the use of

an existing rating system will reduce the vagueness and ambiguities often associated with green building and provide developers and owners with a specific, standardized roadmap to follow to meet the Town Policy requirements.

3.2 Existing Rating Systems

3.2.1 LEED® Green Building Rating System

LEED® provides one definition, widely accepted by industry, for what currently constitutes a 'green building'. It is a flexible, points-based system with a total of 70 available points (in addition to 7 prerequisites). Depending on the number of points achieved, projects are awarded increasing levels of performance as follows:

Certified = 26 points minimum

Silver = 33 points minimum

Gold = 39 points minimum

Platinum = 52 points minimum

Points are awarded for meeting specific performance requirements which are set significantly above standard practice. The system is organized into five main categories: Sustainable Sites, Water Efficiency, Energy & Atmosphere, Materials & Resources, and Indoor Environmental Quality. Each point is defined by an intent and a list of requirements. Most importantly, formal submittals (and supporting documentation) are used to verify performance through an independent third-party review and audit process.

LEED has also published 'application guides' to handle specific building types and common design situations. For example, the CaGBC has developed a LEED for Multi-Unit Residential Buildings application guide and is finalizing a LEED for Multiple Buildings and Campuses application guide. These guides work in conjunction with the LEED Reference Guide and Rating System to offer increased detail and support for projects with a given type and/or situation. Copies are available through the Canada Green Building Council website.

3.2.2 Green Globes Rating System

Green Globes is an online assessment tool in a 'questionnaire' format. It has been developed and is administered by ECD Energy and Environment Canada Ltd., a private company primarily focused on building assessment tools and services. Seven areas of building environmental performance are addressed including: Project Management, Site, Energy, Water, Resources, Emissions & Other Impacts, and Indoor Environment. Points are

An Implementation Strategy for the Town of East Gwillimbury LEED® Policy

assigned for using certain building features, or setting general performance targets. Green Globes has five levels of achievement ranging from One to Five Green Globes.

Two assessments occur. The first is at the schematic design phase and the second is at the construction documents phase. An online questionnaire is filled out at each assessment stage, and scores are determined based on the information provided. The system can be self-administered, but official certification requires engaging a third party to verify the design.

In general, the requirements of the Green Globes rating system can be described as 'simplified'. For example, to determine energy performance, design teams are permitted to use a "screening tool" (developed for the Commercial Building Incentive Program) instead of using a more complete annual energy simulation. It is also important to note that the system is designed to generate the final score prior to the start of construction – activities during the construction phase are excluded from the assessment.

To assess existing buildings and the operations phase of newly constructed buildings, a second rating system has been devised by ECD Energy and Environment Canada Ltd. called the Building Owners and Managers Association (BOMA) Go Green program. This program requires separate application and verification from Green Globes. Go Green assesses a building based on ten operational criteria (such as the existence of a waste management plan), and designates a building based on a single site visit by a qualified BOMA verifier.

3.3 LEED® as the Basis

Although Green Globes covers many of the same topics as LEED, its specificity and level of rigor in documentation, etc. are comparatively weak. As described, Green Globes is ultimately a simplified approach to rating green buildings. The lack of a full energy model is prime example of this. Using a screening tool in place of a complete energy simulation creates an inherent limitation that will almost certainly result in lower than optimal building performance. Furthermore, a Green Globes assessment does not extend into the construction and operation phases of a building – which is, in itself, a fatal flaw. The use of two separate systems (Green Globes and BOMA Go Green) also adds a degree of difficulty when attempting to incorporate a Town-wide policy. For these reasons and others, Green Globes is generally viewed as a system that offers some good green design guidance – but ultimately is insufficient to assess the overall environmental impacts of a building project.

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In comparison, LEED offers a more comprehensive rating system with specific and quantifiable performance requirements that are more likely to produce results that will meet the Town's objectives.

From an implementation perspective, the Green Globes requirement of engaging a third-party to verify each project creates an additional burden since numerous different verifiers may be involved. Conversely, LEED provides verification uniformly for all projects through the CaGBC.

In summary, LEED offers many advantages over other green building rating systems. While it is recognized that LEED has limitations, it clearly provides the best existing framework when evaluated according to East Gwillimbury's key drivers and objectives (see Section 2). It is therefore recommended that LEED be used as the basis for the implementation framework and we recommend maintaining the 'Silver' certification requirement described in the Policy.

The only caveat to this recommendation applies to buildings that are very small (i.e. less than 1200 m²). Since the cost of LEED 'Silver' (as a percentage of total construction cost) is rather high for small buildings, it is recommended that a set of less onerous requirements be considered. Refer to section 3.5 Requirements for Small Buildings for more information.

For buildings that do not fall within the scope of LEED-NC, other LEED systems may be considered, such as "LEED® Core and Shell (CS)", "LEED® for Commercial Interiors (CI)" or "LEED® for Existing Buildings (EB)". Of these, only LEED-CI is currently available in Canada (however, a Core and Shell application guide is currently under development by the CaGBC). The other rating systems are currently only available through the United States Green Building Council (USGBC). The Town has the option to either mandate applications through the USGBC or delay implementing additional policies until these systems (or their equivalent) are developed in Canada. These considerations are beyond the scope of this report, but if the Town is interested, an appropriate process should be established to establish implementation strategy details.

3.4 Additional Mandatory Credits

A workshop was conducted with the Town to review the LEED rating system and identify credits of special significance. In addition to the LEED prerequisites, the following credits were made mandatory for all projects:

An Implementation Strategy for the Town of East Gwillimbury LEED® Policy

- Stormwater Management, Treatment (SSc6.2)
- Light Pollution Reduction (SSc8)
- Water Efficient Landscaping, Reduce by 50% (WEc1.1)
- Water Use Reduction, 30% Reduction (WEc3.2)
- Optimize Energy Performance, 29% Reduction Compared to MNECB (EAc1)
- Best Practice Commissioning (EAc3)
- Ozone Protection (EAc4)
- Measurement & Verification (EAc5)
- Construction Waste Management, Divert 50% from Landfill (MRc2.1)
- Recycled Content, 7.5% (MRc4.1)
- Regional Materials, 10% (MRc5.1)
- Carbon Dioxide Monitoring (EQc1)
- Construction IAQ Management Plan, During Construction (EQc3.1)
- Low-Emitting Materials – Adhesives & Sealants (EQc4.1)
- Low-Emitting Materials – Paints & Coatings (EQc4.2)
- Low-Emitting Materials – Carpet (if carpet is used in the building) (EQc4.3)
- Thermal Comfort, Compliance (EQc7.1)
- LEED Accredited Professional (IDc2)

These credits emphasize the Town's key drivers, and provide a consistent baseline for new projects. Should a project face circumstances that prevent or hinder the achievement of any of the above mandatory credits, the owner or project manager may request a variance from the Town. Appropriate supporting documentation describing the rationale for the variance should accompany the request.

The remaining LEED points are considered 'discretionary'. A project team may select from any of the discretionary points to reach the required minimum certification level of LEED 'Silver' certified (33 points minimum). We strongly advise that all project applications include a 'buffer' of at least 4 points as a safety margin.

Refer to Appendix A for a LEED Scorecard that illustrates the Prerequisites, Mandatory Credits, and Discretionary Credits for projects within the Town of East Gwillimbury. This Scorecard also outlines the submittals to be provided to the Town by the design team throughout the process, as discussed in Section 4.

3.5 Requirements for Small Buildings

For buildings of 1200 m² or less, the cost of achieving LEED 'Silver' certification can be rather high and it is recommended that a set of less onerous requirements be established. We suggest two categories of small building projects:

- Buildings equal to or less than 600 m² (Gross Floor Area)
- Buildings greater than 600 m² but less than 1200 m² (Gross Floor Area)

For buildings ≤600 m², projects should be required to meet the LEED prerequisites and the Town's mandatory credits. Formal LEED certification would not be mandated, however, documentation of compliance with the prerequisite/credit requirements should be submitted in accordance with LEED submittal format to the Town for review. For buildings >600 m² and <1200 m², projects should be required to achieve formal LEED 'Certified' certification including all mandatory credits.

Additional and/or modified requirements could be introduced in stages based on the experience gained from the implementation of the LEED Policy.

4 Establishing the Implementation Process

4.1 Overview

To effectively implement the LEED Policy, a well-defined process for assessing the progress of a project at various important milestones is essential. While it would be very difficult (and costly) for the Town to verify every subtle detail pertaining to LEED throughout the timeline of a project, certain key submittals can and should be reviewed to help track each project and improve the chances of a successful LEED certification.

The following sections outline our recommendations for additional submittals from the project team at the various milestones.

4.2 Requirements at Site Plan Application

- LEED Scorecard with annotations for each prerequisite and targeted credit describing how requirements will be achieved
- Proof of LEED Registration from the CaGBC
- Contact Information for the LEED Main Contact or LEED Consultant
- Experience summary (CV) for the LEED Main Contact or LEED Consultant

- Site Drawing(s) showing existing conditions:
 - Extents of exiting building(s)
 - Extents of hard landscaping areas
 - Environmentally sensitive areas (refer to LEED reference guide)
- Erosion & Sedimentation Control Drawing(s) and Specifications
- Landscaping Drawing(s) showing the following:
 - Plant species matrix (with coverage areas for each species)
 - Locations and extents of each plant species
 - Extent of irrigated area
 - Type(s) of irrigation systems
- Stormwater Management Report with sections describing LEED compliance
- Site Drawing(s) showing proposed design (as applicable):
 - Location of bicycle storage and changing rooms (with showers)
 - Number of parking spaces
 - Location of preferred parking for alternative fueled vehicles
 - Location of preferred parking for carpools
 - Site area matrix showing breakdown of building area (with overhangs), hard landscaping area(s) by material, and vegetated landscaping area
 - Roofing area(s) (by material)
- Exterior Lighting Drawing showing:
 - Light fixture matrix (with models, fixture counts, and lamp wattages)
 - Locations of exterior fixtures (clearly labeled)
 - Photometric plot

4.3 Requirements at Building Permit Application

- Updated LEED Scorecard with annotations for each prerequisite and targeted credit describing how requirements will be achieved
- Responsibility Matrix for prerequisites and targeted credits indicating the project team member responsible for signing each LEED Letter Template (complete with full contact information)

An Implementation Strategy for the Town of East Gwillimbury LEED® Policy

- LEED Letter Templates (complete with application submittals) signed and stamped by the design professional responsible for each prerequisites and credit as shown in Appendix A (as applicable)
- Construction Waste Management Plan (CWMP)
- Detailed ASHRAE 62-2004 calculations
- Indoor Air Quality Management Plan (IAQMP) for construction and pre-occupancy phases of the building

4.4 Status Reports

We recommend that inspectors from the Town conduct regular site visits (minimum 1 per month) during construction to spot check compliance with the prerequisites and credits shown in Appendix A (as applicable). Checklist forms should be developed to assist the inspectors with this process. In addition, monthly status reports should be provided to the Town by the LEED Consultant for each project.

4.5 Final Certification

To complete the process and ensure that projects have fulfilled the Town's LEED Policy requirements, project teams should be required to provide the Town with proof of LEED Application within 6 months of occupancy. We recommend that a full LEED Application be submitted to the Town at the same time as submission to the CaGBC. Proof of achievement of LEED 'Silver' certification should be provided to the Town within one (1) year of occupancy.

5 Penalties & Rewards

The Town has determined that there will be no direct penalties or rewards associated with the LEED Certification process for new buildings in East Gwillimbury. The Policy is viewed as compulsory.

To help enforce compliance with the process, we recommend that the Town hold a security as part of the site plan agreement. It is recommended that the amount of this security be proportional to the gross floor area of the building. Commensurate with the average incremental cost of LEED 'Silver' certification, we recommend an amount in the range of \$8 to \$12 per square foot. This amount should discourage projects from willfully accepting the penalty in place of pursuing LEED certification.

We propose that this security be released in two stages. Half of the security should be released upon certification application to the CaGBC. To receive this release of funds, a full LEED application should be reviewed to the satisfaction of Town staff. The second half should be released upon the building receiving final LEED certification.

The Town may wish to consider providing incentives for building projects that exceed the mandated requirements of the LEED Policy. These may take the form of development charge rebates. The structure and amount of these incentives would be determined by the Town, if applicable.

6 Monitoring Period

Continuous monitoring and improvement of the implementation strategy is essential to ensure the system is effective and efficient. We propose a monitoring period, during which time progress on initial projects can be evaluated and modifications to requirements, submittals, procedures, etc. may be made at the discretion of the Town.

Since this Policy is new and will require specialized knowledge to administer, it is recommended that an external review process be implemented to reduce the "start-up" burden on the Town. A third-party consultant would be responsible for monitoring progress and reviewing submittals for each project until the Town is able to dedicate experienced personnel to the management of the LEED Policy.

7 Town Staff Training

It is recommended that Town staff responsible for monitoring project progress develop LEED expertise. This will minimize confusion and frustration for both the Town and the design teams, increase the success rate of projects, and generate confidence in the Town to manage the LEED Policy. Implementation and enforcement of the LEED Policy will ultimately depend on the ability of Town staff to support and defend the Policy.

In light of this, it is also recommended that Town staff dedicated to the LEED Policy earn the designation of LEED Accredited Professional (LEED A.P.) through the CaGBC.

The LEED system is constantly evolving, and requires an up-to-date knowledge of current standards, performance thresholds and credit interpretations. It is therefore recommended that dedicated personnel from the Town be assigned to manage the LEED Policy and monitor projects. This will potentially reduce delays and misinterpretations associated with

LEED and the administration of the Policy by increasing the efficiency of submittal reviews at project milestones.

8 Summary of Recommendations

The recommendations we have made throughout this report are summarized below for convenience:

1. The Policy should address new industrial, commercial, institutional and multi-unit residential buildings. Major renovations should be handled in a similar fashion. Other building categories such as existing buildings, neighborhood developments, or single-family homes require an entirely different approach.
2. The Policy should use LEED Canada-NC as the basis for evaluating building projects. It is recommended that a 'Silver' certification requirement be maintained (for projects ≥ 1200 m²).
3. The Policy should include and enforce compliance with the 'mandatory' LEED credits that have been identified as having special significance to the Town (Section 3.4).
4. The Policy should make special provision for small buildings. For buildings ≤ 600 m², formal LEED certification should not be required. However, projects should be required to meet the LEED prerequisites and the Town's mandatory credits. Documentation in accordance with LEED submittal format should be submitted to the Town for review. For buildings > 600 m² and < 1200 m², projects should be required to achieve formal LEED 'Certified' certification including all mandatory credits.
5. All projects required to pursue formal certification should include a 'buffer' of at least 4 points at application as a safety margin.
6. The Policy should require projects teams to provide certain key submittals at specified project milestones for the Town's review (Sections 4.2 & 4.3).
7. The Town should conduct regular site visits during construction to verify compliance with the Policy.
8. The Town should hold Policy-related security as part of the site plan agreement. Commensurate with the average incremental cost of LEED 'Silver' certification, an amount in the range of \$8 to \$12 per square foot is recommended. This security

An Implementation Strategy for the Town of East Gwillimbury LEED® Policy

should be released in two stages: half of the security upon the Town receiving and reviewing a copy of the certification application and the second half upon the building receiving final LEED certification.

9. The Town should implement an external review process during the early stages of Policy implementation.
10. The Town should dedicate staff to the management of the LEED Policy. These staff members should earn the designation of LEED Accredited Professional (LEED A.P.).

APPENDIX A

Prerequisites			LEED® Canada-NC Checklist of Required Submittals for Building Projects in East Gwillimbury
Mandatory Credits	20	80	

Prerequisites: Required measures under LEED® Canada-NC Rating System.
Mandatory Credits: Additional required measures under the Town of East Gwillimbury LEED® Policy.
Discretionary Credits: Selectable measures available to achieve LEED® rating (minimum LEED® "Silver").

General Requirements	Site Plan Application	Building Permit Application	Status Reports	<6 Months after Occupancy	<12 Months after Occupancy
Annotated LEED Scorecard	■	■		■	■
Proof of LEED Registration	■				
Responsibility Matrix		■			
Proof of LEED Application				■	
Final LEED Review					■

Sustainable Sites			Site Plan Application	Building Permit Application	Status Reports	<6 Months after Occupancy	<12 Months after Occupancy
■	■	■	Prerequisite 1	Erosion & Sedimentation Control	AS, LT	IC	FR
	■	■	Credit 1	Site Selection	AS, LT		FR
	■	■	Credit 2	Development Density	AS, LT		FR
	■	■	Credit 3	Redevelopment of Contaminated Site	LT		FR
	■	■	Credit 4.1	Alternative Transportation, Public Transportation Access	LT		FR
	■	■	Credit 4.2	Alternative Transportation, Bicycle Storage & Changing Rooms	AS, LT		FR
	■	■	Credit 4.3	Alternative Transportation, Alternative Fuel Vehicles	AS	LT	FR
	■	■	Credit 4.4	Alternative Transportation, Parking Capacity	AS, LT		FR
	■	■	Credit 5.1	Reduced Site Disturbance, Protect or Restore Open Space	AS, LT		FR
	■	■	Credit 5.2	Reduced Site Disturbance, Development Footprint	AS, LT		FR
	■	■	Credit 6.1	Stormwater Management, Rate and Quantity	AS, LT		FR
	■	■	Credit 6.2	Stormwater Management, Treatment	AS, LT		FR
	■	■	Credit 7.1	Heat Island Effect, Non-Roof	AS	LT	FR
	■	■	Credit 7.2	Heat Island Effect, Roof	AS	LT	FR
	■	■	Credit 8	Light Pollution Reduction	AS, LT		FR

Water Efficiency			Site Plan Application	Building Permit Application	Status Reports	<6 Months after Occupancy	<12 Months after Occupancy
	■	■	Credit 1.1	Water Efficient Landscaping, Reduce by 50%	AS, LT		FR
	■	■	Credit 1.2	Water Efficient Landscaping, No Potable Use or No Irrigation	AS, LT		FR
	■	■	Credit 2	Innovative Wastewater Technologies		LT	FR
	■	■	Credit 3.1	Water Use Reduction, 20% Reduction		LT	FR
	■	■	Credit 3.2	Water Use Reduction, 30% Reduction		LT	FR

Energy & Atmosphere			Site Plan Application	Building Permit Application	Status Reports	<6 Months after Occupancy	<12 Months after Occupancy
■	■	■	Prerequisite 1	Fundamental Building Systems Commissioning		LT	FR
■	■	■	Prerequisite 2	Minimum Energy Performance		LT	FR
■	■	■	Prerequisite 3	CFC Reduction in HVAC&R Equipment		LT	FR
	■	■	Credit 1	Optimize Energy Performance		LT	FR
	■	■	Credit 2.1	Renewable Energy, 5%		LT	FR
	■	■	Credit 2.2	Renewable Energy, 10%		LT	FR
	■	■	Credit 2.3	Renewable Energy, 20%		LT	FR
	■	■	Credit 3	Best Practice Commissioning		LT	FR
	■	■	Credit 4	Ozone Protection		LT	FR
	■	■	Credit 5	Measurement & Verification		LT	FR
	■	■	Credit 6	Green Power		LT	FR

APPENDIX 2

AS = Additional Submittals (refer to report) LT = Letter Template (c/w application submittals) IC = Inspection Checklists FR = Final Review from CaGB

APPENDIX A

Prerequisites			LEED® Canada-NC Checklist of Required Submittals for Building Projects in East Gwillimbury
Mandatory Credits			
Discretionary Credits			
7	20	60	

Prerequisites: Required measures under LEED® Canada-NC Rating System.
Mandatory Credits: Additional required measures under the Town of East Gwillimbury LEED® Policy.
Discretionary Credits: Selectable measures available to achieve LEED® rating (minimum LEED® "Silver").

Materials & Resources			Site Plan Application	Building Permit Application	Status Reports	<6 Months after Occupancy	<12 Months after Occupancy
■	Prerequisite 1	Storage & Collection of Recyclables		LT			FR
■	Credit 1.1	Building Reuse: Maintain 75% of Existing Walls, Floors, and Roof	AS			LT	FR
■	Credit 1.2	Building Reuse: Maintain 95% of Existing Walls, Floors, and Roof	AS			LT	FR
■	Credit 1.3	Building Reuse: Maintain 50% of Interior Non-Structural Elements	AS			LT	FR
■	Credit 2.1	Construction Waste Management: Divert 50% from Landfill		AS	IC	LT	FR
■	Credit 2.2	Construction Waste Management: Divert 75% from Landfill		AS	IC	LT	FR
■	Credit 3.1	Resource Reuse: 6%				LT	FR
■	Credit 3.2	Resource Reuse: 10%				LT	FR
■	Credit 4.1	Recycled Content: 7.5% (post-consumer + ½ post-industrial)				LT	FR
■	Credit 4.2	Recycled Content: 15% (post-consumer + ½ post-industrial)				LT	FR
■	Credit 5.1	Regional Materials: 10% Extracted and Manufactured Regionally				LT	FR
■	Credit 5.2	Regional Materials: 20% Extracted and Manufactured Regionally				LT	FR
■	Credit 6	Rapidly Renewable Materials				LT	FR
■	Credit 7	Certified Wood				LT	FR
■	Credit 8	Durable Building				LT	FR

Indoor Environmental Quality			Site Plan Application	Building Permit Application	Status Reports	<6 Months after Occupancy	<12 Months after Occupancy
■	Prerequisite 1	Minimum IAQ Performance		AS, LT			FR
■	Prerequisite 2	Environmental Tobacco Smoke (ETS) Control		LT			FR
■	Credit 1	Carbon Dioxide (CO ₂) Monitoring		LT			FR
■	Credit 2	Ventilation Effectiveness		LT			FR
■	Credit 3.1	Construction IAQ Management Plan: During Construction		AS	IC	LT	FR
■	Credit 3.2	Construction IAQ Management Plan: Testing Before Occupancy		AS		LT	FR
■	Credit 4.1	Low-Emitting Materials: Adhesives & Sealants			IC	LT	FR
■	Credit 4.2	Low-Emitting Materials: Paints and Coatings			IC	LT	FR
■	Credit 4.3	Low-Emitting Materials: Carpet			IC	LT	FR
■	Credit 4.4	Low-Emitting Materials: Composite Wood and Laminate Adhesives			IC	LT	FR
■	Credit 5	Indoor Chemical & Pollutant Source Control				LT	FR
■	Credit 6.1	Controllability of Systems: Perimeter Spaces		LT			FR
■	Credit 6.2	Controllability of Systems: Non-Perimeter Spaces		LT			FR
■	Credit 7.1	Thermal Comfort: Compliance		LT			FR
■	Credit 7.2	Thermal Comfort: Monitoring		LT			FR
■	Credit 8.1	Daylight & Views: Daylight 75% of Spaces		LT			FR
■	Credit 8.2	Daylight & Views: Views 90% of Spaces		LT			FR

Innovation & Design Process			Site Plan Application	Building Permit Application	Status Reports	<6 Months after Occupancy	<12 Months after Occupancy
■	Credit 1.1	Innovation in Design: TBD				LT	FR
■	Credit 1.2	Innovation in Design: TBD				LT	FR
■	Credit 1.3	Innovation in Design: TBD				LT	FR
■	Credit 1.4	Innovation in Design: TBD				LT	FR
■	Credit 2	LEED® Accredited Professional	AS, LT				FR

TOWN OF EAST GWILLIMBURY LEED-NC POLICY

Project Type	Minimum Environmental Building Standard	Implementation
Non-residential development less than 600m ² (6,500ft ²)	East Gwillimbury standards (LEED Prerequisites + Mandatory EG Credits) (7+ 18 points)	<ul style="list-style-type: none"> • Minimum Site Plan Application requirements mandate that a LEED-AP consultant be retained by developer at the beginning of the application process, including an initial submission • Conditions set out in the site plan/subdivision approval (SPA) process requiring appropriate LEED standard • Key submittals will be required at the building permit stage and at various stages of the development (from design to approval to construction)** • LEED securities will be calculated based on \$5/SF*** to a maximum of \$500,000 and incorporated into the site plan agreement letter of credit • These securities will be released in 2 stages: <ul style="list-style-type: none"> ○ ½ released upon proof of application for certification with CaGBC ○ ½ released upon receipt that the project received the appropriate LEED standard certification from CaGBC*
Non-residential development between 600m ² (6,500ft ²) & 1200m ² (13,000ft ²)	LEED "Certified" (26 points)	
Non-residential development in excess of 1200m ² (13,000ft ²)	LEED "Silver" (33 points)	
Multiple Residential development (apartment-style)	LEED "Silver" (33 points)	

* If project fails to satisfy CaGBC standards, the matter will be subject to Council review to determine options & potential remediation

** To be read and implemented in connection with the Town of East Gwillimbury's checklist and scorecard

*** A baseline policy to advance discussions on the amount of securities

8

SUSTAINABLE DEVELOPMENT THROUGH LEED™

(Regional Council at its meeting on June 21, 2007 amended the following Clause so that the recommendations read as follows:

- 1. The Region of York adopt a policy to provide a 20-35% increase in servicing allocation for development proposals meeting the following criteria:**
 - i. Significant water conservation is achieved,**
 - ii. Location is served by Viva rapid transit or other major YRT, GO and TTC operated or proposed transit routes,**
 - iii. Site is within a Regional Centre or Regional Corridor, or Local Centre,**
 - iv. Building meets Regional TOD guidelines including supporting an overall, long-term density target of 2.5 Floor Space Index,**
 - v. Three stream waste reduction is incorporated into the building, and**
 - vi. A minimum LEED™ Silver certification is achieved.**
- 2. This report be circulated to the local municipalities.**
- 3. Planning and Economic Development staff be directed to proceed with an implementation strategy in consultation with the local municipalities.)**

The Planning and Economic Development Committee recommends the adoption of the recommendations contained in the following report dated June 7, 2007, from the Commissioner of Corporate Services, the Commissioner of Planning and Development Services and the General Manager, Water and Wastewater Branch:

1. RECOMMENDATIONS

It is recommended that:

- 1. Staff be directed to consult with local municipalities, UDI/GTHBA and other stakeholders on a policy that would provide a 20-35% increase in servicing allocation for development proposals meeting the following criteria:**
 - i. Significant water conservation is achieved,**
 - ii. Location is served by Viva rapid transit or other major YRT, GO and TTC operated transit routes,**
 - iii. Site is within a Regional Centre or Regional Corridor, or Local Centre,**



EG Small (less than 600m²) Green Building Checklist

Building Name:

Building Address:

Sustainable Sites		Required Points	3
<input type="checkbox"/>	Prereq 1	Erosion & Sedimentation Control	Required
<input type="checkbox"/>	Credit 1	Stormwater Management, Treatment	Required
<input type="checkbox"/>	Credit 2	Light Pollution Reduction	Required
Water Efficiency		Required Points	3
<input type="checkbox"/>	Credit 3	Water Efficient Landscaping - Reduce by 50%	Required
<input type="checkbox"/>	Credit 4	Water Use Reduction - 20% Reduction	Required
<input type="checkbox"/>	Credit 5	Water Use Reduction - 30% Reduction	Required
Energy & Atmosphere		Required Points	7
<input type="checkbox"/>	Prereq 2	Fundamental Building Systems Commissioning	Required
<input type="checkbox"/>	Prereq 3	Minimum Energy Performance	Required
<input type="checkbox"/>	Prereq 4	CFC Reduction in HVAC&R Equipment	Required
<input type="checkbox"/>	Credit 6	Ozone Protection	Required
<input type="checkbox"/>	Credit 7	Optimize Energy Performance	Required
<input type="checkbox"/>	Credit 8	Best Practice Commissioning	Required
<input type="checkbox"/>	Credit 9	Measurement and Verification	Required
Materials & Resources		Required Points	4
<input type="checkbox"/>	Prereq 5	Storage and Collection of Recyclables	Required
<input type="checkbox"/>	Credit 10	Construction Waste Management: Divert 50% from Landfill	Required
<input type="checkbox"/>	Credit 11	Recycled Content: 7.5% (post-consumer + 1/2 post-industrial)	Required
<input type="checkbox"/>	Credit 12	Regional Materials: 10% Extracted and Manufactured Regionally	Required
Indoor Environmental Quality		Required Points	8
<input type="checkbox"/>	Prereq 6	Minimum IAQ Performance	Required
<input type="checkbox"/>	Prereq 7	Environmental Tobacco Smoke (ETS) Control	Required
<input type="checkbox"/>	Credit 13	Carbon Dioxide (CO ₂) Monitoring	Required
<input type="checkbox"/>	Credit 14	Construction IAQ Management Plan: During Construction	Required
<input type="checkbox"/>	Credit 15	Low-Emitting Materials: Adhesives & Sealants	Required
<input type="checkbox"/>	Credit 16	Low-Emitting Materials: Paints & Coating	Required
<input type="checkbox"/>	Credit 17	Low-Emitting Materials: Carpet	Required
<input type="checkbox"/>	Credit 18	Thermal Comfort - Compliance	Required
Innovation & Design Process		Required Points	1
<input type="checkbox"/>	Credit 19	LEED Accredited Professional	Required
		Required Points	26



Town of
East Gwillimbury

COPY

CWC 2006-~~208~~DL5

**COMMITTEE OF THE WHOLE
DEVELOPMENT AND LEGAL SERVICES**

MOVED BY "Councillor Johnston"

DATE : September 5, 2006

BE IT RESOLVED THAT Development and Legal Services, Building and By-law Branch and Planning Branch Report 2006-16, dated September 5, 2006, regarding Leadership in Energy and Environmental Design (LEED) for New Construction and Major Renovations, Canada -- (NC) Version 1.0, be received and adopted as Municipal Policy.

THAT the LEED policy outlined in Appendix 6, be adopted as the LEED policy for the Town.

THAT staff investigate the implementation of the LEED rating systems for Existing Buildings, new Core and Shell buildings, and for Neighborhood Development, including School Board and other government building construction, and report back to the Committee of the Whole.

THAT this report and policy be referenced in coming Official Plan reviews.

THAT a copy of this Report be forwarded to the Town of East Gwillimbury Developer Group and York Region Chapter of U.D.I. for further discussion regarding implementation process.

THAT discussions be held with Key Stakeholders, including Builders, with respect to the most effective way to implement this policy and report back to Committee of the Whole.

CARRIED
DEFEATED
TIED (LOST)

"Councillor V. Hackson, Chair"
Virginia Hackson, Chairperson



MEMORANDUM

TO: Town of East Gwillimbury
ATTN: Robin Skinner
FROM: Fraser Nelson
DATE: September 7, 2007
RE: Comments on LEED-NC Implementation

The following are Metrus' comments on the August 3, 2007 draft LEED-NC implementation proposal.

- LEED silver is harder to achieve on larger industrial buildings. It is easier to implement on higher density residential and commercial buildings.
- There is a shortage of LEED-AP consultants. Implementation timelines will be affected by this in the short term until more consultants are accredited. East Gwillimbury needs to take this into account in their implementation by allowing flexibility on consultant selection. The Town will also experience this problem as you note in the Final Certification section.
- Construction waste management plans are not well known or understood so they will be difficult to produce at the outset. Finding consultants to do the report will also be problematic in the short term. East Gwillimbury needs to have flexibility in addressing this during implementation.
- We do not agree with the requirement for a LEED security to be posted. East Gwillimbury, as regulator, has site plan approval control and building inspections to verify proper implementation without the additional burden of posting securities and threat of financial penalty if project "fails to satisfy CaGBC standards".
- Incentives are a positive step to the implementation. Details need to be provided as we see this as an essential part of council's policy.