



DEVELOPMENT AND LEGAL SERVICES REPORT 2006-16

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

Date: September 5, 2006

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

Origin: Development and Legal Services
Building and By-law Branch and Planning Branch

1.0 RECOMMENDATIONS

1. **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.
2. **THAT** the LEED policy outlined in Appendix 6, be adopted as the LEED policy for the Town.
3. **THAT** staff investigate the implementation of the LEED rating systems for Existing Buildings, new Core and Shell buildings, and for Neighborhood Development, and report back to the Committee of the Whole.
4. **THAT** this report and policy be referenced in coming Official Plan reviews.
5. **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.
6. **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.

2.0 PURPOSE

The purpose of this report is to provide a Corporate Policy with respect to Leadership in Energy and Environmental Design (LEED) standards for the Town of East Gwillimbury. These standards may be utilized for new public buildings as

well as new private buildings of Industrial, Commercial, Institutional or High-rise Residential use.

3.0 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 with the Town. This policy initiative was adopted as an initial step in establishing higher environmental standards for development in the Town. As part of this process, Council directed staff to bring a report back to Committee of the Whole Council on the subject of LEED. As a result of the successful implementation of Energy Star construction practices for new single family residences and town homes, the next progressive step toward sustainable development within the Town of East Gwillimbury would be the implementation of a Canada Green Building Council program called Leadership in Energy and Environmental Design (LEED) directed at Industrial, Commercial, Institutional and Residential High-rise buildings.

3.1 Planning Act

On December 12, 2005, the Minister of Municipal Affairs and Housing introduced legislation to amend several provincial laws regulating land use planning. Bill 51, the *Planning and Conservation Land Statute Law Amendment Act, 2005*, is intended to continue and complement earlier reforms (the new Provincial Policy Statement (PPS), *Places to Grow Act*, *Greenbelt Act*) and introduce reform of the Ontario Municipal Board (OMB).

The proposed Bill would create new planning tools and stricter expectations for up-to-date local policies. Under the proposed Planning Act changes, municipalities would be given the ability to regulate and plan for more aspects of building design, and there would be more enforcement and accountability for decisions made at the local level. Of particular note, the proposed changes include new provisions under Section 41 (Site Plan Control) which allow municipalities to consider energy efficiency and sustainability as a Site Plan consideration. In addition, the Province proposes adding a new interest to its list of Matters of Provincial Interest in Section 2 of the Planning Act: "*The promotion of development that is designed to be sustainable, to support public transit and to be oriented to pedestrians.*" This addition would better enable municipalities to support the creation of well-designed development.

The proposed Planning Act changes are consistent with the goals and objectives of the Strategic Plan to promote innovative energy practices and build livable, sustainable communities, while protecting the greater public interest.

Therefore, the proposed changes to the Planning Act are aimed at enhancing a municipality's powers and authority in terms of building massing and matters of environmental building design. Although these provincial policies are not yet in place, this LEED policy objective would be consistent with the direction in which the province is moving.

4.0 DISCUSSION AND ANALYSIS

4.1 What is LEED (NC) Canada Version 1.0?

To put LEED (NC) for New Construction and Major Renovations into context we must first review what Energy Star is all about. Energy Star is applicable to single family dwellings and town home projects. It is a fairly simple program to enhance specific aspects of residential buildings during construction in an effort to ensure the finished product is more energy-conscious with the goal of reducing operating costs. This is achieved by increasing insulation levels, installing more efficient windows, providing higher efficiency mechanical systems, etc. These improvements are considered a prescriptive set of standards whereby the builder chooses from a set of enhancements and implements these enhancements during construction.

LEED on the other hand is something very different. This program looks at a completely integrated design of the entire project from site selection through to commissioning of the project and includes matters involved in the engineering and site planning for the project. It was created to:

- Define "green buildings" by establishing a common standard of measurement
- Promote integrated, whole building design practices
- Recognize environmental leadership in the building industry
- Stimulate green competition
- Raise consumer awareness of green building benefits, and
- Transform the building market

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 69 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 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. The lowest of the four levels is "Certified" followed by "Silver", "Gold" and finally "Platinum".

4.2 To Which Construction Projects Will LEED Apply ?

LEED is designed to capture new Industrial, Commercial, Institutional and High-rise (multiple-storey) Residential construction.

It is the intention of this report to recommend that LEED is applied to all new public facilities constructed and owned by the Town of East Gwillimbury.

This recommendation will also extend to all private sector buildings and development, as well as public buildings owned and constructed by other governmental agencies and constructed within East Gwillimbury.

4.3 What Level of LEED Will Be Expected?

The Regional Municipality of York, Lake Simcoe Region Conservation Authority, Region of Waterloo, City of Vancouver, City of Calgary, City of Ottawa, and other governmental agencies have adopted a policy that new construction by these public bodies shall at a minimum meet the LEED certification level of "Silver". This level of certification tends to be a rating that significantly improves the overall building design, performance, occupant comfort, etc. with an increased capital construction cost within an acceptable level.

Construction of private buildings or public buildings owned and constructed by other governmental agencies constructed within East Gwillimbury shall be constructed to the same level of LEED certification as those developed by the Town.

At this point, the Town has not had any experience or examples of LEED development or buildings in the municipality. As an initial step, it is noted that proposed new commercial development at the north-east corner of Yonge Street and Green Lane is working co-operatively with Town staff to develop the Town's

first LEED standard building. This matter is being explored through a future Site Plan Application and stems from a condition imposed by the Committee of Adjustment in June of this year (Appendix 5).

4.4 Costs of LEED and New Construction

LEED design and LEED-implemented construction methods generally have costs in excess of a regularly designed and built building. Most recent studies related to the design and construction costs associated with LEED place a premium of between 2% and 3% over regular construction practices when building to the "Silver" certification level. An increase to either a "Gold" or "Platinum" certification level results in a slightly higher percentage of cost increase. Typically, this increase will range between 3.5% to 30% greater than a regular building.

To help offset the increase in design and construction cost of LEED buildings, there are incentives available from the Federal Government through the Commercial Building Incentive Program (CBIP). This program offers two times the annual energy savings for a building that demonstrates a 25% or better energy efficiency over that of the Model National Energy Code for Buildings up to a maximum one time grant of \$60,000. LEED criteria produce a building with an energy savings in the range of 50% for a LEED "Silver" certified building.

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

Economic considerations may be broken down into a number of different categories.

- **Direct Capital Cost:** Costs associated with the original design and construction of the building
- **Direct Operating Costs:** Total costs of building operation, including energy use, water use, maintenance, waste, insurance, taxes, etc. over the entire building life or the specified time horizon of the study
- **Life Cycle Cost:** Method of combining capital and operating costs to determine the net economic effect of an investment
- **Productivity Effects:** Dollar value related to changes in occupant productivity relative to atypical or conventional building
- **External or Tertiary Economic Effects:** Reduced reliance on infrastructure, reduced greenhouse gases, reduced health costs, etc. that are not readily captured by a private investor

Most studies tend to utilize a Life Cycle Cost analysis to determine the economic benefits of a LEED building. This approach is generally looked at over a 20 - 50 year outlook. Studies have indicated that this method of economic analysis has shown cost savings associated with LEED building greatly outweigh capital cost increases. A 2002 economic study in the European Union on implementing energy efficient measures into new construction determined that double the capital costs of the energy efficiency measures would be realized over the life cycle of the building.

4.5 Ontario Building Code

Council needs to be aware that the requirements of LEED construction practices are beyond the requirements of the Ontario Building Code Act and Regulations. The only available method to implement LEED requirements into new construction is from industry support and the Town's requirements in association with Planning Act approvals such as the Site Plan or Subdivision approval process. Should Council endorse LEED as municipal policy, then future Site Plan and Subdivision agreements would incorporate the requirements of LEED certification into new construction.

Since the Ontario Building Code Act and Regulations do not assist the Municipality with LEED implementation, LEED is to be designed and administered entirely by third party independent consulting and certification.

This process would involve the applicant retaining the services of a LEED-certified consultant to orchestrate the design process, review the construction and certify the completed project. The Town would receive appropriate documentation ensuring LEED standards are adhered to during the various phases of design and construction.

5.0 INDUSTRY AND PUBLIC CONSULTATION

At this point in the development of the Town there is not a great deal of this type of construction underway. Future construction of this type will be significantly greater when existing planned and future employment land corridors are developed. It is recommended, however, that this Report be circulated to the key stakeholder groups in the Town including U.D.I. and the East Gwillimbury Developer Group. As previously initiated with the Energy Star program, Corporate Services may co-ordinate a public education and media release program launching the LEED corporate policy.

6.0 FINANCIAL IMPLICATIONS

With the implementation of LEED-certified construction projects on Town facilities, there will be additional upfront design and construction costs as mentioned in Section 4.4. However, these costs have been shown to be significantly outweighed by the return on investment when recognizing a life cycle cost accounting approach.

7.0 CONFORMITY WITH THE STRATEGIC PLAN

This report is respectful of the Town of East Gwillimbury Strategic Plan. Specifically, Pillars One (Protecting and Enhancing the Environment), Two (Providing Quality Programs and Services to the Community) and Three (Investing in Municipal Infrastructure) of the Strategic Plan are being addressed.

8.0 CONCLUSION

Other LEED initiatives from the United States Green Building Council (USGBC) are currently in pilot form. LEED (USGBC) for Existing Buildings (EB), LEED (USGBC) for Core and Shell (CS) and LEED (USGBC) for Neighbourhood Development (ND) are programs that may be applicable to the Town of East Gwillimbury as they mature from pilot projects.

Following on the success of Energy Star, Leadership in Energy and Environmental Design (LEED) is a natural progression for the Town of East Gwillimbury to make. The Town is showing national leadership with the required implementation of LEED building design and construction and may be a model for other jurisdictions to follow.

Next steps in the Town's Strategic Energy Sustainability Program could include similar or LEED "off-shoot" programs. In particular, LEED for Neighbourhood Design offers improved opportunities for the Town's various new growth areas (refer to Appendix 4). It is recommended that further initiatives be explored by staff and that the Town incorporate strategic energy efficiency requirements into all new and upcoming Official Plan reviews.

Information Sources:

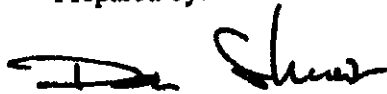
- Jan H. Ravens, LEED Certified Architect with Allen and Sheriff Architects, Inc.
- LEED Green Building Rating system for Construction and Major Renovations Canada Version 1.0
- A Business Case for Green Buildings in Canada by the Canada Green Building Council
- U.S. Green Building Council Website
- Canada Green Building Council Website

9.0 ATTACHMENTS

- Appendix 1: LEED Canada – NC 1.0 Scoring System
- Appendix 2: Definitions for LEED Core and Shell Buildings
- Appendix 3: Definition for Neighborhood Development
- Appendix 4: Neighborhood Developments Fact Sheet
- Appendix 5: Committee of Adjustment Decision A3/06 (134603 Ontario Limited (Yonge – Green Lane Development))
- Appendix 6: Additional LEED Policy

This Report has been reviewed by the senior management team.

Prepared by:



Tim Gibson
Director of Building and By-Laws



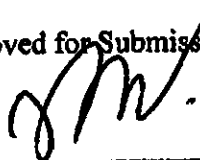
Dan Stone
Director of Planning

Recommended by:



Don Sinclair
General Manager, Development and Legal Services

Approved for Submission:



Thomas R. Webster
Chief Administrative Officer

LEED Core and Shell Buildings:

The LEED Green Building Rating System for Core and Shell Development (LEED-CS) is for designers, builders, developers and new building owners who address sustainable design for new core and shell construction. Broadly defined, core and shell construction covers base building elements, such as the structure, envelope and building-level systems, such as central HVAC, etc. The CS product recognizes that the division between owner and tenant responsibility for certain elements of the building varies between markets.

The LEED for Core and Shell Rating System is a market specific application which recognizes the unique nature of core and shell development. The LEED-CS Rating System acknowledges the limited sphere of influence over which a developer can exert control in a speculatively developed building and encourages the implementation of green design and construction practices in areas where the developer has control. Developers can often implement green strategies which indirectly enable future tenants to benefit. Conversely, developers can inadvertently implement strategies which prohibit tenants from executing green fit-out. LEED-CS works to set up a synergistic relationship which allows future tenants to capitalize on green strategies implemented by the developer. These key building areas, interior space layout, building finishes, lighting, mechanical distribution, and plumbing fixtures, etc, are often outside the direct control of the developer. Thus, the scope of a LEED-CS project is limited to those aspects of the project over which the developer has direct control. It is the responsibility of the developer/owner to properly identify which LEED rating system to use for the LEED building certification.

LEED-CS is designed to be complementary to the LEED for Commercial Interiors Green Building Rating System (LEED-CI). The LEED-CI and LEED-CS rating systems establish green building criteria for both developer/owners and tenants.

Neighbourhood Development

This rating system will integrate the principles of smart growth, urbanism, and green building into the first national standard for neighbourhood design. Whereas other LEED products focus primarily on green building practices, with only a few credits regarding site selection, LEED-ND will emphasize smart growth aspects and neighbourhood design of development while still incorporate a selection of the most important green building practices. Guided by the Smart Growth Network's ten principles of smart growth and the Charter for New Urbanism it will include compact design, proximity to transit, mixed use, mixed housing type, and pedestrian- and bicycle- friendly design. In short, LEED-ND will create a label which could serve as a concrete signal of, and incentive for, better location, design, and construction of neighbourhoods and buildings



LEED-ND

About LEED for Neighborhood Developments

What is LEED® for Neighborhood Developments?

The LEED for Neighborhood Developments (LEED-ND) Rating System, currently under development, will integrate the principles of smart growth, urbanism, and green building into the first national standard for neighborhood design. LEED-ND is being developed by USGBC in partnership with the Congress for New Urbanism (CNU) and the Natural Resources Defense Council (NRDC).

What is the significance of LEED-ND certification?

Using the framework of the LEED Green Building Rating System™, LEED-ND certification will recognize development projects that successfully protect and enhance the overall health, natural environment, and quality of life of our communities. Like other LEED rating systems, LEED-ND will deliver more efficient energy and water use – especially important in urban areas where infrastructure is often overtaxed. It will also focus on smart growth and new urbanist best practices, including designing neighborhoods that reduce vehicle miles traveled and building communities where jobs and services are accessible by foot or public transit.

What is the current status of LEED-ND?

The LEED for Neighborhood Developments Core Committee completed its first preliminary draft in September 2006, and held a 45-day comment period on that draft between September 13 and October 27, 2005. The comment period was primarily held to solicit comments from members of the LEED-ND Corresponding Committee, but others interested in commenting on the draft were welcome to do so as well. The LEED-ND Core Committee is now reviewing the comments submitted and will post a document summarizing their responses in early 2006.

How will LEED-ND be different from the Application Guide for Campus and Multiple Buildings Projects?

LEED-ND will focus on residential and commercial developments developed by a single entity but likely sold or leased to multiple consumers. The Application Guide for Campus and Multiple Building Projects will target institutional and office park campuses, usually owned and operated by a single entity. It is an application guide for LEED-NC and, therefore, will not incorporate smart growth to any greater extent than LEED-NC does.

What's next?

The comments made during the recent comment period will aid the LEED-ND Core Committee in revising the preliminary draft and producing a draft which will be used as the LEED-ND Pilot Rating System. The pilot draft will then be tested with a limited number of projects through a LEED-ND pilot program. The LEED-ND Core Committee will use the information learned during the pilot program to produce a revised draft of the LEED-ND Rating System, which will then be posted for public comment before it is submitted for the final ballot vote.

What are the Core Committee and the Corresponding Committee?

The LEED-ND Core Committee does the day-to-day work of developing the rating system; while a second, larger corresponding committee is also established for every LEED product so that other interested stakeholders can also participate. In this way, a wider group of experts and interested parties can stay updated and provide feedback. The LEED-ND Corresponding Committee is invited to comment on draft versions of the LEED-ND rating system and will have the first opportunity to respond to the call for pilot LEED-ND projects. In addition, LEED-ND Corresponding Committee members receive minutes from LEED-ND Core Committee meetings and notification of LEED-ND events.



LEED-ND

I would like to stay involved with LEED-ND developments. How can I join the Corresponding Committee?

The LEED-ND Corresponding Committee is open to USGBC members and non-members alike, but there are different ways to join:

- USGBC members should go to www.usgbc.org, log into Your Account, and subscribe to the LEED-ND committee listserv through the individual site user account section of the website.
- If you are not a USGBC member, send an e-mail to nd@committees.usgbc.org stating that you'd like to join the LEED-ND Corresponding Committee.

What is the timeline for developing LEED-ND?

May 2004: LEED-ND development began.
Fall 2006: LEED-ND Pilot Program launches.
2007: LEED-ND Public Comment periods begin.
2008: LEED-ND v2.0 Ballot and Launch.

How do I find out more?

For more information, visit www.usgbc.org/leed/nd or e-mail leedinfo@usgbc.org.



Town of
East Gwillimbury

CO...MITTEE OF ADJUSTMENT

Chris Cannon, Secretary-Treasurer
905-478-4282 x265
ccannon@eastgwillimbury.ca

DECISION

DATE: June 2, 2006
FILE: A3/06
APPLICANT(S): Yonge & Green Lane Development Corporation
And 1346013 Ontario Limited
ADDRESS: N/E Corner of Yonge Street and Green Lane
LEGAL DESCRIPTION: Lot 101, Concession 1, EYS
VARIANCE:

- permit the development of a retail warehouse on the subject property
- grant relief from Section 24.6.1 to allow for a 8.0 metre (26.2 ft.) rear yard setback
- Section 6.29(a)(i), Section 6.29(c)(i), and Section 6.29(c)(ii) will not apply
- permit parking in the "Transitional (T)" zone

We, the undersigned members of the Committee of Adjustment have on this date made a decision that the variance(s) be **APPROVED** as submitted because in the opinion of the Committee the proposed use is minor in nature, is desirable for the appropriate development or use of the land, and meets the general intent and purpose of the by-law and of the official plan, subject to the following conditions:

- 1 The proposed retail warehouse not exceed 14,900 m²
- 2 The proposed retail warehouse be located in the north east portion of the property as illustrated on Appendix 3.
- 3 The proposed development of a retail warehouse and associated parking area be developed in accordance with the provisions of Section 41 of the Planning Act.
- 4 The Site Plan process to include architectural control by the Town including the requirement for environmental friendly building design and exploration of L.E.E.D. certification.
- 5 That the rear yard setback of 8 metre rear yard setback be approved as part of this variance and that Section 6.29 (a)(i), 6.29 (c)(i), Section 6.29 (c)(i) and Section 6.29 (c)(ii) not apply.
- 6 That a parking area be permitted in the "Transitional (T)" zone in conjunction with a permitted use.

APPENDIX 5

"Our town, Our future"

19000 Leslie Street, Sharon, Ontario L0G 1V0 Tel: 905-478-4282 Fax: 905-478-2808
www.eastgwillimbury.ca

Town of East Gwillimbury LEED Policy

1. All new Town of East Gwillimbury facilities be constructed to meet LEED (NC) Canada Version 1.0 certification level "Silver".
2. All new Industrial, Commercial, Institutional and High-rise Residential Buildings in East Gwillimbury be built to LEED (NC) Canada Version 1.0 certification level "Silver", when such development requires Site Plan or Subdivision approval.
3. By January 2010 LEED (NC) Canada Version 1.0 "Silver" certification requirements be applied to all major renovation projects of Industrial, Commercial, Institutional and High-rise Residential Buildings within the Town of East Gwillimbury.
4. Transitional consideration be extended to the Town's LEED policy and apply only to proposals requiring Planning Act approvals submitted after September 5, 2006.



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.

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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