



**SUBJECT: Sustainable Building and Development Guidelines update**

**TO: Community Planning, Regulation & Mobility Cttee.**

**FROM: Community Planning Department**

Report Number: PL-07-21

Wards Affected: all

File Numbers: 502-02-74

Date to Committee: December 7, 2021

Date to Council: December 14, 2021

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**Recommendation:**

Approve as amended, the Sustainable Building and Development Guidelines attached as Appendix A to community planning department report PL-07-21; and

Direct the Director of Community Planning and the Executive Director of Burlington Economic Development to consider the feasibility of including the Sustainable Building and Development Guidelines in the development of the Comprehensive Community Improvement Plan framework; and

Direct Council to advocate to the Province to adopt the highest tiered energy standards following the introduction of the National Energy Code for Buildings 2021 (NECB); and

Direct the Director of Community Planning to draft a business case for the preparation of a green roof by-law and green roof construction standard in 2023.

**PURPOSE:**

The purpose of this report is to share the findings of the research conducted as part of Program One of the [Climate Action Plan](#) and to recommend minor amendments to the Guidelines as a result of this work.

The Climate Action Plan (2020) sets a target for the community to become net carbon neutral by 2050. One of the key program areas identified in the plan is that the City should consider an update to the Guidelines to create a tiered set of performance measures for new buildings. Program One states that:

*“Staff will update the existing Sustainable Building and Development Guideline, researching best practices in other jurisdictions and legislative authority. The*

*Guidelines will include a tiered set of performance measures that will require, incentivize and/or encourage new buildings to be built to a low carbon standard. Financing mechanisms will be explored that help reduce upfront costs.”*

Additionally, this report also provides feedback on the staff direction from SD-15-18 to:

*“Direct the Director of City Building to report back on the feasibility of implementing a by-law regarding green roofs and other technologies including the review of other municipalities (SD-15-18).”*

### **Vision to Focus Alignment:**

- Support sustainable infrastructure and a resilient environment

This work aligns with Burlington’s Strategic Plan 2015-2040 which encourages energy efficient buildings and other on-site sustainable features and sets a net carbon neutral goal for the community. This work also aligns with Burlington’s Climate Emergency Declaration (2019) and the City’s Climate Action Plan (2020).

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### **Background and Discussion:**

Council first expressed an interest in pursuing sustainable building and design policies through various Council directions between 2006 and 2010. In 2012, Draft Sustainable Building and Development Guidelines were proposed alongside an Official Plan Amendment and endorsed by Council. The report presented the Sustainable Building and Development Guidelines which had been subject to public and agency consultation. It also provided a proposed implementation plan for the Sustainable Building and Development Guidelines. In 2016, the Draft Sustainable Building and Development Guidelines were received by Council through staff report [PB-83-16](#).

In April 2018, the Sustainable Building and Development Guidelines were approved by Council as part of the consideration of the adoption of the new Official Plan, through staff report [PB-04-18](#): ‘Revised proposed new official plan recommended for adoption’. In 2019, minor changes were made to the document and is the current version of the [Sustainable Building and Development Guidelines](#).

### **Purpose of the Guidelines**

The purpose of the Sustainable Building and Development Guidelines are to encourage sustainable design and approaches through Planning Act applications, in keeping with the City’s declaration as a sustainable community. The Guidelines are a comprehensive checklist of various sustainable design, construction and operation approaches, and are used as a tool to assess the sustainable features of development applications.

The Guidelines serve as a tool to help evaluate development applications and contain both required and voluntary criteria. The required criteria align to existing City by-law regulations and standards that apply in Burlington including Ontario Building Code requirements. The voluntary criteria set out opportunities for the proponent of a development application to select from a menu of options with the potential to increase the sustainability of their development. The Guidelines address sustainability approaches related to site design, transportation, the natural environment, water, energy and emissions, waste and building materials and maintenance, monitoring, and communication. The checklist on page 4 of the [Guidelines](#) is enabled by the Sustainable Design policies of the new Official Plan.

### **Strategy/process**

To fulfil the objective of Program One of the Climate Action Plan and to provide feedback on the Staff Direction noted above ([SD-15-18](#)), City Staff reviewed the Sustainable Building and Development Guidelines through the following steps:

1. Convening an internal-departmental working group comprised of Staff from the Legal Department, Finance, Community Planning, City Building, Development & Storm Water Engineering, Environment, Infrastructure & Community Services, Roads, Parks & Forestry and Capital Works to provide feedback on the Sustainable Building and Development Guidelines;
2. Reviewing the Guidelines to identify any modifications required to support implementation including review of the criteria in relation to the Ontario Building Code and other modifications to the voluntary criteria in the Guidelines;
3. Undertaking a best practice review of other municipalities to identify program design and financial incentive mechanisms;
4. Evaluating the legislative authority of the City of Burlington to develop and implement a green roof by-law; and
5. Examining legal and financial issues with relevant internal departments.

### **Proposed Modifications to the Sustainable Building and Development Guidelines**

The proposed modifications to the Guidelines attached as Appendix A to this report, include minor revisions to reflect the findings of this report.

- Addition of green roofs to the voluntary guideline in section 3.11 to address Staff Direction SD-15-18;
- Adding or updating hyperlinks in the Guidelines for reference purposes; and
- Housekeeping items to improve clarity and consistency of language.

## Summary of Findings

A tiered set of performance measures as well as other mechanisms to strengthen the implementation of the Sustainable Building and Development Guidelines to contribute to the reduction of greenhouse gas emissions, better energy efficiency and the delivery of higher quality buildings were considered. Although there are constraints to implementing these options at the present time, there are incremental steps, that can be considered in the future to work toward supporting new developments to contribute to the City's objectives for climate change resilience.

The research that was undertaken by staff yielded the following key findings:

- Minor modifications are recommended to the Sustainable Building and Development Guidelines.
- At this time, a tiered approach to implementing the Sustainable Building and Development Guidelines is not feasible. This is because the City of Burlington, does not have the legal authority to require measures beyond those in the Ontario Building Code. In the absence of the authority to require measures, the City must rely on incentivization to encourage proponents to voluntarily undertake sustainable development practices. The findings of this report suggest that at present, financial and other incentive mechanisms are not feasible.
- Staff recommend monitoring other municipalities and reporting back to Council if a change is necessary.
- Staff recommend that the Community Planning Department and Burlington Economic Development work together to evaluate if Community Improvement Plans are an appropriate policy tool for the implementation of the voluntary Sustainable Building and Development Guidelines. The Burlington Brownfield Community Improvement Plan was approved by Council on March 23, 2021 through staff report [ECDEV-01-21](#). This CIP includes an element of supporting enhanced sustainability measures.
- Canada is updating its national energy codes to provide a higher degree of energy performance in new buildings through a tiered energy code. The most stringent of which, is expected to be net-zero energy ready. The National Energy Code for Buildings 2020 (NECB) is expected to be published in December 2021 and is anticipated to add a new compliance path called "Tiered Energy Compliance". There is an advocacy role for the City to encourage the province to adopt the highest tiered energy codes possible to meet the City's objective of being net carbon neutral by 2050.
- Staff recommend adding a voluntary criteria to the Sustainable Building and Development Guidelines to encourage the implementation of green roofs and green walls as part of the response to Staff direction [SD-15-18](#). While staff

acknowledge that the City has the legislative authority to implement a green roof by-law, it should be recognized that this would represent a resource intensive process for multiple departments in the City. Further, extensive engagement to develop green roof construction standards and implement the by-law would be required.

### **Burlington Green Roof By-Law Feasibility**

On April 24, 2018, as a result of a discussion about the new Official Plan, the following direction was identified:

*'Direct the Director of City Building to report back on the feasibility of implementing a by-law regarding green roofs and other technologies including the review of other municipalities (SD-15-18).'*

In order to complete this staff direction, staff reviewed the current enabling legislation to determine the City's legislative authority to implement a green roof by-law. Staff reviewed the practices of other municipalities that have green roof by-laws in force. Staff then reviewed background information about green roofs to identify best practices and processes undertaken in developing and implementing a green roof by-law.

#### Legislation Review

Section 97 of the Municipal Act (2001) grants a lower tier municipality the authority to enact a green roof by-law, stating that:

*"Without limiting sections 9, 10, and 11, the power described in subsection (1) includes the power to require the construction of a green roof or alternative roof surfaces that achieve similar levels of performance to green roofs 2017, c.10, Sched. 1,s.5."*

This enabling legislation permits the City to implement a by-law requiring green roofs. In developing such a by-law, the City has the discretion to decide the type of developments that would be subject to a green roof by-law and whether any exemptions and/or cash in lieu would be appropriate.

#### Green Roof Overview

The Ontario Municipal Act (2001) defines a 'green roof' as:

*"A roof surface that supports the growth of vegetation over a substantial portion of its area for the purpose of water conservation or energy conservation. 2017, c.10, Sched. 1, s.5."*

Within an urban environment, green roof projects have the ability to reduce the urban heat island effect, reduce flooding and water quality challenges and reduce costs related to stormwater retention. The addition of vegetation improves air quality, resulting

in improved human health and well-being. Green roofs also provide space and habitats for pollinators. These benefits can help meet the objectives set out in the Climate Action Plan (2020), the Climate Emergency Declaration (2019) and can provide benefits to the public.

### Green Roof By-law process

Developing a green roof by-law will require working in close partnership with the Building Department, industry experts and stakeholders to develop a green roof construction standard. A construction standard is critical to the implementation of a green roof by-law. A construction standard provides minimum requirements for design and construction of green roofs that meet both the City's objectives and the requirements of the Ontario Building Code (OBC). Developing a construction standard would entail a resource intensive process requiring extensive engagement with both internal and external experts. After the by-law is enacted, there would be additional staff resources and skills required for implementation.

In the absence of a green roof by-law and construction standard, each application for a green roof would be reviewed as a distinct, "alternative solution" under the OBC, which does not include specific requirements for green roof design. Requiring applicants to apply for an alternative solution would impose significant extra costs per application in addition to building permit fees. Therefore, a construction standard has the potential to facilitate the construction of green roofs in a more cost-effective manner and to create certainty for proponents and the City.

Staff recommend developing a business case, including all of the process steps highlighted above, for the introduction of a green roof by-law in 2023. To address this staff direction in part, staff recommend implementing minor modifications to the Sustainable Building and Development Guidelines to incorporate green roofs into the voluntary requirements.

### **Next steps**

Staff have identified the following near term and monitoring actions to support future amendments to the Guidelines to identify enhanced sustainability measures. Staff will continue to apply the Sustainable Building and Development Guidelines to development applications.

### Near Term Actions:

The following actions can be implemented now, and staff are actively progressing these:

- Approve minor modifications as shown in Appendix A to the Sustainable Building and Development Guidelines including incorporating green roofs and green walls into the voluntary requirements; and

- Monitor current implementation of sustainability guidelines in other municipalities and report back to Council if a change to the Sustainable Building and Development Guidelines is recommended.

#### Monitoring Actions:

The following actions would be triggered by another process, and staff are actively monitoring these:

- Consider alternative approaches to encouraging sustainable design practices;
- Consider developing a green certification award as a category in developing a future Urban Design award program to recognize achievements in sustainable building. This was identified in the Guidelines (2019) as a potential incentive to recognize efforts to include voluntary criteria in the construction of new buildings. The City is considering an Urban Design award program which could include a Sustainable Building and Development award category;
- Evaluate as part of the development of the Comprehensive Community Improvement Plan framework if CIPs are feasible for implementing the Sustainable Building and Development Guidelines; and
- Monitor Ontario Building Code changes in relation to the introduction of tiered energy codes and report back if changes to the Sustainable Building and Development Guidelines are recommended.

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#### **Financial Matters:**

Not applicable.

#### **Total Financial Impact**

Not applicable.

#### **Source of Funding**

Not applicable.

#### **Other Resource Impacts**

Not applicable.

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#### **Climate Implications**

Burlington City Council declared a climate emergency in April 2019 in response to the concerns about the impact that a changing climate is having on the city and

communities around the globe. The Climate Action Plan (2020) sets a target for the community to become net carbon neutral by 2050. One of the key program areas identified in the plan is that the City should consider an update to the Guidelines to create a tiered set of performance measures for new buildings.

This project considered a tiered set of performance measures as well as other mechanisms to strengthen the implementation of the Sustainable Building and Development Guidelines which would contribute to the reduction of greenhouse gas emissions, better energy efficiency and delivering higher quality buildings. Although there are constraints to implementing these options at the present time, there are incremental steps, including the consideration of a comprehensive Community Improvement Plan Strategy, that can be considered in the future to work toward supporting new developments to contribute to the City's objectives for climate change resilience.

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### **Engagement Matters:**

A working group was established which included staff from internal teams including the Legal Department, Finance, Community Planning, Building Department, Development & Storm Water Engineering, Environment, Infrastructure & Community Services, Roads, Parks & Forestry and Capital Works.

The working group has been consulted through various stages of the project to gather their input on the legal, financial, technical and implementation aspects of the project. The working group has also reviewed this staff report and provided feedback which has been incorporated into the report.

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### **Conclusion:**

This report addresses direction from the Climate Action Plan and in part addresses a 2018 staff direction related to green roofs. A tiered set of performance standards is not recommended at this time. However, several near-term actions have been identified to be considered in supporting the implementation of the Sustainable Building and Development Guidelines. In addition, minor changes are recommended to the Sustainable Building and Development Guidelines to include green roofs as a new voluntary measure.

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Respectfully submitted,

Laura Ross

Planner II

(905) 335-7600 ext.7555

**Appendices:**

- A. Sustainable Building and Development Guidelines, 2021
- B. Sustainable Building and Development Guidelines with proposed modifications
- C. Proposed modifications table

**Report Approval:**

All reports are reviewed and/or approved by Department Director, the Chief Financial Officer and the Executive Director of Legal Services & Corporation Counsel.