



**STAFF REPORT  
ACTION REQUIRED**

**Supplementary report: Green Roof By-law  
Communications**

<b>Date:</b>	April 22, 2009
<b>To:</b>	Planning and Growth Management Committee
<b>From:</b>	Chief Building Official and Executive Director, Toronto Building and Chief Planner and Executive Director, City Planning
<b>Wards:</b>	ALL
<b>Reference Number:</b>	Pg090018

**SUMMARY**

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In considering the March 27, 2009 report “Toronto Green Roof By-law” at its meeting of April 14, 2009, the Planning and Growth Management Committee directed the Chief Planner and Chief Building Official to consider and report on all written communications received on the Green Roof By-law at its meeting including the letter from the Deputy Mayor.

The revisions to the By-law proposed in reviewing this supplementary report would expand the scope of the draft Green Roof By-law to include a greater number of smaller developments city-wide. The recommendations considered include: removal of all exemptions for industrial, school and non-profit housing use buildings; separate requirements for green roofs on industrial buildings; and the decrease of the gross floor area (GFA) threshold to include smaller development.

## **RECOMMENDATIONS**

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**The Chief Planner, Executive Director of the City Planning Division and the Chief Building Official, Executive Director, Toronto Building recommend that:**

1. Based on the review of written communications submitted to the Planning and Growth Management Committee at its meeting on April 14, 2009, that the Committee consider amending the draft Green Roof By-law through one or all of the following:
  - a. Requiring industrial buildings to include a green roof equal to 10 percent of the available roof space to a maximum of 2,000 m<sup>2</sup>.
  - b. Requiring non-profit housing to be subject to the same requirements as other residential buildings.
  - c. Requiring Separate and Public Schools to be subject to the same requirements as non-residential buildings.
  - d. Amending coverage and threshold requirements to include new developments with a gross floor area between 2,000 m<sup>2</sup> and 4,999 m<sup>2</sup> which would be required to provide a minimum coverage of 20 percent of the available roof space.
  - e. Amending minimum height requirements for residential buildings to include new developments of a height greater than 20 metres.
  - f. Removing the exemption for non-vegetative border from the calculation of available roof space.

### **Financial Impact**

The recommendations will have no financial impact beyond what has already been approved in the Toronto Building and City Planning base budgets.

### **DECISION HISTORY**

At its meeting on April 14, 2009 the Planning and Growth Management Committee (PG&M) endorsed a report recommending that the draft Green Roof By-law be deferred for consideration at a public meeting to be held on May 6, 2009.

The Committee also referred all communications, including the letter from Deputy Mayor Pantalone, to the Chief Building Official and Executive Director, Toronto Building and to the Chief Planner and Executive Director, City Planning, for consideration, and a report

to the Committee at the May 6, 2009 public meeting, which shall include an implementation option.

<http://www.toronto.ca/legdocs/mmis/2009/pg/decisions/2009-04-14-pg24-dd.htm>

## **ISSUE BACKGROUND**

At the April 14, 2009 meeting of the Planning and Growth Management Committee there were six deputations and three written submissions received. The communications included proposed revisions to the draft Green Roof By-law. Written submissions to the Committee included letters from the Deputy Mayor, Green Roofs for Health Cities (GRHC) and the Building Industry and Land Development Association (BILD).

## **COMMENTS**

Communications received by the Planning and Growth Management Committee provided recommended amendments to the draft Green Roof By-law and requested clarification on specific items in the By-law. Of the communications received two supported expanding the scope of the By-law through additional requirements and one recommended that the By-law not be passed in favour of a voluntary approach. The following provides a response to the communications received on the content of the draft Green Roof By-law at the April 14, 2009 Planning and Growth Management Committee meeting.

### **Industrial Buildings**

In the communication received from the Deputy Mayor (April 8, 2009), it was recommended that industrial buildings not be exempt from the requirements of the Green Roof By-law. The letter includes a recommendation to require 10 percent green roof coverage for industrial buildings to a maximum size of 2,000 m<sup>2</sup>. In its written submission, GRHC proposed that a green roof be required for conditioned industrial buildings, at a minimum coverage for 50 percent of the available roof space and 25 percent for unconditioned industrial buildings.

The report before P&GM Committee on April 14<sup>th</sup> recommended that industrial buildings be exempt from the requirements of the By-law. This was in keeping with City Council approved policies in place to protect and encourage employment uses within the city, including policies in the Official Plan, a city-wide financial incentive program for key employment sectors (Imagination, Manufacturing, Innovation, Technology Grants Program); exemptions from Development Charge fees and facilitation support through the development approval process; as well as the agenda for Prosperity.

Options had been considered in the draft Green Roof By-law Report to provide a maximum green roof area of no larger than 10 percent of available roof space up to a

maximum size of 2,000 m<sup>2</sup>. This option would limit the cost of the green roof to as low as \$200,000 for large industrial buildings. Nevertheless, industrial sector stakeholders noted that any green roof requirement would be considered overly onerous from a cost standpoint.

## **Non-profit Housing**

Communication received from the Deputy Mayor and GRHC recommended that non-profit housing not be exempt from the requirements of the Green Roof By-law.

The report before P&GM Committee on April 14<sup>th</sup> recommended that non-profit housing be exempt from the requirements of the By-law.

Council has policies in place to support non-profit housing, including waiving of development charges and relief from planning approval fees. The additional cost of a green roof was seen as inconsistent with such supportive policies for non-profit housing.

Should it be decided to include non-profit housing in the draft Green Roof By-law, then the same requirements for residential buildings should apply to non-profit housing.

## **Schools**

Communication received from the Deputy Mayor and GRHC recommended that separate and public schools not be exempt from the requirements of the Green Roof By-law.

The report before P&GM Committee on April 14<sup>th</sup> recommended that public and separate school buildings be exempt from the requirements of the By-law.

The draft Green Roof By-law report concluded that the benefits of a Green Roof can be achieved by alternative measures at-grade, given the size and amount of open space associated with school sites.

Should it be decided to include public and separate school buildings in the draft Green Roof By-law, then the same requirements for non-residential buildings should apply to schools.

## **Coverage and GFA Thresholds**

The communication from the Deputy Mayor proposed that the GFA thresholds be lowered to require buildings with a GFA between 2,000 and 4,999 m<sup>2</sup> to construct a green roof on 20 percent of the available roof space.

In the comments from Green Roofs for Healthy Cities, it was similarly suggested that thresholds be lowered to include smaller buildings as well as a coverage requirement ranging from 40 to 75 percent of the available roof space. GRHC also recommended that the exemption for non-vegetative borders in the calculation of available roof space be removed.

In their comments, BILD requested clarification on the calculation of available roof space for tall buildings, exemptions from available roof space calculation and compatibility with common outdoor amenity space requirements.

The report before P&GM Committee on April 14<sup>th</sup> proposed graduated coverage thresholds on new buildings starting at 5,000 m<sup>2</sup>. The coverage requirement proposed in the report ranges from 30 to 60 percent of the available roof space based on the size of the building in order to accommodate rooftop mechanical units and outdoor amenity space requirement in areas not covered by a green roof.

While the number of smaller buildings that would be required to install a green roof would be significant, the proposed coverage of 20 percent is small and would not be expected to have a significant impact on building cost.

Should it be decided to lower the minimum GFA threshold in the draft Green Roof By-law, then all new development with a GFA between 2,000 m<sup>2</sup> and 4,999 m<sup>2</sup> should be required to provide a green roof with a minimum coverage of 20 percent of the available roof space.

## **Minimum Height Requirement**

The communication from the Deputy Mayor proposed that development on Toronto's main streets not be exempt from the green roof requirement, and that residential developments with a height over 10 metres should be required to construct a green roof.

In the comments from Green Roofs for Healthy Cities, it was suggested that exemption for residential buildings should be dropped from 23 metres to 12 metres.

In their comments, BILD suggested that there should be no mandatory requirements for green roofs at all.

The report before P&GM Committee on April 14<sup>th</sup> proposed that all residential development with a height equal to or greater than 23 metres be required to install a green roof.

The City encourages mid-rise or main street type development along its Avenues—development that is transit-friendly and supports mixed uses and higher densities while protecting the local neighbourhood character and scale as set out in the Council approved Official Plan. The neighbourhood scale is protected by limiting the maximum height to

the width of the right-of-way (20 to 36 metres). While this building form is desired, the costs are relatively higher for this building type, which makes it a less attractive investment for developers. The City is seeking to foster this type of development through a variety of incentives. Requiring green roofs on all buildings of 10 m and greater would add a financial cost which may restrict this type of development.

Should it be decided to lower the minimum height threshold in the draft Green Roof By-law, then all new residential development with a height greater than 20 metres should be required to provide a green roof.

## **Available Roof Space**

The communication from GRHC recommended that non-vegetative borders be removed from the calculation of available roof space. BILD also asked for clarification on what roof-top features were included in the calculation of available roof space.

Available roof space is considered in the draft Green Roof By-law as the roof area of the building excluding areas for renewable energy devices, private terraces and non-vegetative borders required by the Toronto Green Roof Construction Standard (TGRCS). A portion of the common outdoor amenity space can be provided as a green roof for use by the residents of the building.

Should it be decided to amend the definition of available roof space, then non-vegetative border should be included in the calculation of available roof space.

## **Implementation**

The communication from the Deputy Mayor proposed that the implementation date be advanced to December 1, 2009.

In their comments, BILD suggested that having the Green Roof By-law come into effect January 2010 does not leave adequate time for training for either city staff or the development community, and asks that applications in the site plan/draft plan approval stage by this date be exempted.

The report before P&GM Committee on April 14<sup>th</sup> proposed that the Green Roof By-law come into effect on January 31, 2010, and that it apply to all building permit applications submitted after that date. The proposed date allows the development industry time to integrate green roofs into the design of new buildings and will ensure that many developments with site plan applications already approved or submitted will not be required to provide a green roof.

Prior to the By-law coming into effect there are a number of legal and administrative actions that are required to be undertaken by the City of Toronto and the Province:

- The Province needs to amend the Ontario Building Code to make a by-law passed under S.108 of the City of Toronto Act (COTA) applicable law.
- Toronto Building will be consulting further with its Technical Advisory Group to finalize the Supplementary Guidelines document for release prior to the implementation date.
- The report recommends that the Chief Building Official bring forward any technical updates to the TGRCS following the adoption of the wind and fire standards currently being finalized by the American National Standards Institute.
- Staff training and education of the development community.

A minimum transition period of approximately nine months is required for the successful implementation of the By-law. It is therefore proposed that the effective date for the Green Roof By-law to come into effect is by January 31, 2010.

### **Appeal Process - Ontario Building Code**

The communication from BILD asked for clarification on the process to appeal the Green Roof Construction Standard.

Currently, the Ontario Building Code (OBC) is silent on green roof construction. It does not contain specific provisions regulating the design and construction of green roofs. The TGRCS has been developed with the objective of meeting the OBC requirements for the building as a whole, while setting out a set of minimum requirements for green roof design that also achieve the objectives of the Code. Toronto Building has worked with the Technical Advisory Group to develop a standard that does not conflict with the Code, either in regulating an area already occupied by the Code or exceeding existing Code requirements.

Under the BCA, the Building Code Commission (BCC) only has jurisdiction to hear disputes concerning the sufficiency of compliance with the technical requirements of the OBC between a permit applicant, holder or recipient of an order and a Chief Building Official. The BCC would likely not have the jurisdiction to resolve technical disputes on the TGRCS.

The By-law provides the opportunity for the Chief Building Official to consider alternatives to the construction standard in the same manner that alternatives to the Ontario Building Code are required. Matters of dispute regarding the application of any aspect of the TGRCS would likely be resolved through a Section 25 appeal under the Building Code Act. Any person who considers themselves aggrieved by any decision the Chief Building Official with respect to the By-law could appeal the decision to the Ontario Superior Court of Justice. Anyone who disagrees with any aspect of the construction standard in the By-law, could request an amendment to the By-law.

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## **SIGNATURE**

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