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Is green roof bylaw valid or a cash grab?

Late last month, Toronto became the first city in North America to adopt a bylaw requiring the construction of green roofs on new developments. It comes into force Jan. 31, 2010.

A green roof is a system where a vegetated area becomes part of the building's roof. It includes plant life, a growing medium, a filter layer, a drainage layer, a root resistance layer and a waterproof membrane.

Under the new rules, a green roof will be required on all new buildings with more than 2,000 square metres of gross floor area. The area of the green roof will range from 20 per cent to 60 per cent of the roof, depending on the size of the development.

Green roofs have been used for years in Europe and the United States, but they are relatively new to Canada.

They are said to reduce stormwater runoff, energy consumption, the local ambient temperature and associated cooling costs. As well, they have been touted as beautifying the city, creating more green spaces and providing opportunities for food production.

Unfortunately, however, there are significant problems with the city's efforts to legislate environmental policy. From a legal point of view, it seems to me that Toronto is improperly using the City of Toronto Act to mandate building standards, a legislative area reserved exclusively to the provincial legislature. As such, it could well be exposed to a legal challenge.

The idea that the very shallow growing medium on green roofs can be used for food production may well be wishful thinking.

Fire is also an issue. According to a report last year in *Property Week* magazine, Swiss insurer Zurich, the third-largest insurer in the U.K., warned that green roofs could dry out and become flammable.

The City of Toronto is aware of the fire issue and is currently reviewing safety issues with Toronto Fire Services. A staff report last month noted that "there is no standard, establishing minimum requirements" with respect to fire safety.

Structural failure is another issue with green roofs. A presentation at the American Institute of Architects (AIA) convention in 2007 reported that in one U.S. case, a green roof failed and the water leakage caused significant structural damage.

The AIA presentation also forecast insurance claims and litigation resulting from failure to deliver promised energy savings, mould or other environmental hazards as a result of poor maintenance of the roof, or a roof collapse resulting from improper construction, maintenance or installation.

Wherever green roofs and green buildings are found, green building litigation is sure to follow. The United States has already seen its first green building-related litigation and its Canadian counterpart cannot be far off. An article in *Green Real Estate Law Journal* earlier this month predicted that "green building-related litigation will remain on the horizon for the near future."

Green roofs present serious issues for condominium corporations. Owners face significantly higher maintenance costs for green roofs to minimize the risk of fire and to ensure proper drainage.

The typical lifespan of roof membranes, with or without a green roof, is estimated at 25 years. When a membrane has to be replaced, condominium reserve funds will be hit with huge costs.

Locating a roof leak is challenging even where there is no green roof, but when the source of a leak is concealed by tons of vegetation and a growing medium, the costs can easily skyrocket.

I'm not sure that adequate study has been given to the green roof initiative in Toronto.

I also wonder why, if green roof technology is such a laudable goal, the City of Toronto stuck a "cash in lieu" provision in the bylaw, allowing builders to pay the city \$200 per square metre instead of simply building the roof. Or is this just another city cash grab?

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