

New Sound Transmission Challenges - A Case Study

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The focus of this paper is the sound transmission issue as it relates to revitalization and development projects in "The Kings" (two recently rezoned districts in the central area of Toronto). The preamble to the zoning changes involved a great deal of input by politicians, planners, building regulators and the development industry and the goal is to provide for revitalized development in the target districts which over the years have become rundown and under-utilized. Many of the buildings in these two districts are old abandoned industrial structures. The goal of the rezoning is to allow a broad range of mixed uses within buildings by lifting existing land-use controls which would normally restrict certain combinations of uses.

Current sound transmission regulations contained in the Ontario Building Code call for minimum sound transmission class (STC) levels of 50 where residential occupancies are to be separated from other uses. The only exception to this requirement is where a residential occupancy is separated from a mechanical machine room such as an elevator. In this instance the Ontario Building Code requires a minimum STC level of 55.

At the time the existing Ontario Building Code sound transmission regulations were set out it may well be that the concept of a "mixed-use building" included a narrower spectrum of uses than those now being developed in the two target areas of Toronto known as "The Kings". It is anticipated that levels of 50 STC will not adequately separate residential uses from other uses such as industrial or studio uses where heavy machinery may be present, or from entertainment facility uses which include high-tech sound systems and assemblies of large crowds.

Efforts were undertaken to request the Province to include higher STC levels in the most recent amendments to the Ontario Building Code. No support has been provided at the Provincial level. Conceivably, the Province is attempting to keep the Ontario Building Code more generic to the needs of smaller municipalities where such large-scale developments are less likely to occur.

It is now incumbent on municipalities such as Toronto to look for other means to secure adequate STC levels where merited. One mechanism under review in Toronto is to incorporate such STC levels in property standards regulations which govern existing buildings once occupied. This process would, however, need to be addressed at the time of renovation in order to ensure that adequate measures are introduced into buildings in the most cost-effective manner. Similarly, related objectives are being sought in Toronto through the Development Approval process which precedes permit applications and construction.

It is anticipated that developers and builders will share an interest, along with Planners and By-law Enforcers, to ensure adequate sound protection in new-style developments. Proper construction most certainly is a key to better marketability.

The planning process is still ongoing to address the somewhat unique issues in the two target districts, with a focus on sound transmission concerns. Related issues include the need to create a model for a simplified planning/permit process as well as a need to elicit the support of designers and developers by ensuring that the process doesn't impede their objectives to develop property in these two areas which are in need of revitalization. The issues relate to construction and renovation, as well as to the ongoing and changing building uses expected during the lifetime of the buildings in the areas in question.

Traditional land-use controls do not appear to answer these special concerns in regard to sound transmission. The challenge to be looked at is how to seek out creative and workable solutions. As new design concepts continue to evolve, municipalities are challenged to ensure that planning and permit processes incorporate the sound attenuation aspects of both new construction and renovation of broad spectrum mixed uses in buildings. These types of developments are the trend for the future. It is incumbent upon municipal processes to assist and nurture such projects in a manner that will facilitate the revitalization of neighbourhoods and will allow mixed uses to reasonably co-exist within buildings.