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REVIEW OF ONTARIO'S LAND-USE APPROVALS PROCESS
One Acoustical Consultant's Opinion

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ABSTRACT

Residential developments adjacent to industrial developments are generally considered incompatible land-uses. However, in the Greater Toronto Area (GTA), in order to satisfy the demand for more houses, it has become increasingly more common to attempt to locate residential development adjacent to existing and/or proposed industrial developments. The focus of this paper is to provide some insights into the current approvals process, the difficulties being experienced with the current system and the potential solutions.

SOMMAIRE

Le développement de zones résidentielles à proximité de zones industrielles sont généralement considérés comme des terres à usages incompatibles. Cependant, comme la Région du Grand Toronto fait face à une demande de logements de plus en plus croissante, il est devenu courant de tenter de développer des projets de construction d'habitations à coté des zones industrielles pré-établies ou en voie de développement. L'intérêt de cet article est de fournir quelques perspicacités dans le processus courant d'approbation des projets, et dans les difficultés expérimentés avec le système actuel ainsi que la proposition de solutions potentielles.

INTRODUCTION

Noise and vibration are issues that are not always taken seriously by municipalities, developers, builders or industrial operators. Many times these issues are addressed in a project because it is the only way an approval will be obtained. There is no real desire to make the living environment, both indoors and outdoors acoustically acceptable nor acoustically desirable. It is simply a matter of doing the minimum in order to satisfy a condition of approval. There are exceptions to the above comments; however, the exceptions are not common.

This approach may have been acceptable in the past but there are signs that the rules are changing. In Ontario, the Ministry of the Environment (MOE) was the agency responsible for the review and final approval on most noise related issues. In the recent past the MOE has been downloading much of its approval tasks to the local area municipalities. While it was originally thought that this would result in less red tape and faster approvals, the opposite has been the case. Most municipalities are not equipped with the technical expertise to review acoustical matters and consequently rely on peer reviews of noise issues prior to providing an approval of the noise report. This can and does frequently result in disagreements amongst consultants because there is not a definitive authority providing the approval. The interpretation of the guidelines is left to the municipality and/or the consultants, resulting in many differences in the application of the guidelines.

In order to gain a full appreciation of the complications and pitfalls with the current system, some background is required. Addressing noise and applying/interpreting the MOE guidelines is complex and at times confusing; however, there are possible solutions to improve the current system and ensure residential developments and industries can co-exist.

APPROVAL PROCESS

Until recently most municipalities were required to obtain MOE approval on noise related issues. For example, a new residential development proposed adjacent to any source of noise (including transportation and stationary sources) was required, as a condition of draft plan approval, to submit an Environmental Noise Report. In some cases, a Preliminary

Noise Report may have been required to establish feasibility of meeting sound level limits by implementing noise mitigation measures into the development. Approval from both the area municipality and the MOE was required to clear the conditions of draft plan approval. The MOE was solely responsible for the review of stationary sources of noise such as dust collectors, truck terminals, and asphalt plants, etc.; while the area municipality was generally responsible for the review of transportation sources. Because the MOE was closely involved in the review of noise reports, most municipalities did not require staff who were highly skilled in the area of acoustics or familiar with the MOE Guidelines.

Once the downloading process began, the MOE was no longer required to clear the conditions of draft plan approval, though they were still available for comment. The MOE still retained jurisdiction over stationary sources of noise.

Stationary sources of noise are quickly rising to the forefront in many proposed residential developments because insufficient importance is being placed on to the acoustical impact of these sources on the future residents or the impact of the residents on the commercial/industrial facilities.

STATIONARY SOURCES

The sources of noise associated with industry are referred to as stationary sources. Stationary sources as defined by the MOE are sources of noise that may move, but are generally confined to the premises where the activity takes place. Trucks once they have left the public roads are required to be included as a stationary source of noise, though the trucks themselves do not require a Certificate of Approval.

The evaluation of a stationary source of noise comes about as a result of one of three conditions:

- A new residential development must prepare a Noise Report to clear conditions of draft plan approval, addressing all sources of noise, including stationary sources. The MOE Land-Use Guideline, LU-131 applies in these cases;

- A new stationary source of noise, itself, must prepare a noise/vibration report to ensure that it does not adversely impact any existing, proposed or zoned residential lands. The applicable guideline in this instance is NPC-205. In addition, a Certificate of Approval may also be required; or

- A complaint investigation results in the assessment-investigation of a stationary source.

CERTIFICATE OF APPROVAL PROCESS

In Ontario many operations/facilities are required to have a Certificate of Approval (C of A) in order to operate. A C of A is required not only for noise and vibration but also for air quality issues. The MOE has several documents itemizing the specific sources that require a C of A, as well as details regarding the documentation needed when applying for a C of A. Other than specific noise by-laws which are enforced by each municipality, a C of A is the only noise item governed by legislation and not by guidelines alone. The Environmental Protection Act (EPA) regards noise and vibration as contaminants and requires that a C of A be issued by the MOE for specific sources. Because of this inclusion in the EPA, stationary sources of noise have an importance not associated with transportation sources. This causes much confusion.

THE CURRENT SYSTEM

While the MOE has retained the responsibility for issuing Certificates of Approval, there is not a formal process for notifying new stationary sources of noise that they may require a C of A. The onus for obtaining a C of A is with the stationary source. Large companies with significant resources and significant sources of noise are aware of the process and generally will obtain a C of A. Smaller operations and most municipalities are not aware of these requirements and more importantly, are not aware of the implications of allowing residential developments to be located adjacent to commercial/industrial facilities. Most municipalities require that new residential developments submit a noise/vibration report to ensure compliance with the MOE/municipal noise guidelines. The same requirement does not apply to new commercial/industrial facilities. This is a serious oversight because once the residential development and industrial development are built the onus for compliance with the EPA falls on the shoulders of the industry. If complaints arise, the onus for compliance is with the industry and not with the residents, regardless of who was there first. If the industry is found to be out of compliance they may be required to mitigate at their own cost, which may be considerable; fines may be imposed on the industry; they may be required to shut down a portion of the operation or shut down for part of the day/night until they can comply with the EPA; in the worst case scenario they may be permanently shut down or be forced to relocate if compliance is too onerous or too expensive.

A further complication is that the guidelines which apply to a stationary source of noise when an application for a C of A is made or a complaint is being investigated differ from the guidelines that apply when the residential proponent is investigating a stationary source. That is, NPC-205 is more stringent than LU-131. The implication of this difference is that even if the residential proponent mitigates the stationary source to comply with LU-131, the stationary source of

noise would be out of compliance if a complaint arose and if NPC-205 were applied. The reason is that NPC-205 applies anywhere on the residential property, whereas LU-131 applies only to the façade of the building and to the outdoor amenity area (usually the rear yard).

In the recent past there have been numerous applications to rezone industrial land to residential use. This is not necessarily a problem if appropriate mitigation measures are implemented. The most significant omission in the design of mitigative measures is separation distance. There are two reasons why separation distance is resisted as a desirable mitigative measure. First, the "buffer" land is costly and second, a suitable development use for the buffer lands may be difficult to find. Many applications seek to provide mitigation through the use of sound barriers, upgraded architectural elements and/or central air conditioning.

While these are all useful components of a comprehensive solution there are several deficiencies with this approach alone. These include:

- MOE guidelines do not advocate the use of upgraded architectural elements and air conditioning as mitigation methods. The reason is that for many stationary sources these techniques do not provide sufficient reduction in the sound level, particularly if there are tonal components to the sound. The MOE guidelines do not set indoor sound level limits but rather, limits at the outside façade of the building and on the residential property.

- The use of innovative house designs such as blank walls, insensitive uses such as bathrooms on the façade nearest the source and sealed windows all appear to be viable solutions to the problem but can pose difficulties. The occupant can change the interior space of a house and windows can be replaced. The innovative house design may not be easy to sell, prompting the builder to modify the design so it does sell. These modifications in effect negate any protection the industry might have had.

- Mitigation at the receptor cannot contemplate expansion of the industrial facility. While it is possible to allow for some future growth, even the industry itself may not be aware of where the future will take them. Allowing controls mainly at the receptor may severely restrict the potential growth of the industry.

- The industrial property may be zoned for "noisier" uses than are currently operating on the site. The MOE guidelines require that all permitted uses be evaluated in the preparation of noise reports. However, even if it is possible to evaluate the potential impact of the permitted uses, it is not possible to implement the mitigative solutions because the operation does not yet exist.

- In many cases the sources of noise are elevated to the extent that excessively high sound barriers may be required to achieve the guidelines. In some cases it is not possible to achieve the guidelines with the use of sound barriers. Even if sound barriers are technically feasible there are several issues that arise. Who will maintain the structure? Is it aesthetically pleasing?

- If mitigation is implemented at source, many of the existing sources can be attenuated to achieve the MOE guidelines. This however also has serious implications. How significant should the modifications to the operation be? Who pays for the "upgraded" mitigation? Who pays for the ongoing maintenance of the mitigation? Who pays for the additional mitigation if complaints arise? Who enforces any agreements between the developer and the industry? Does the presence of residential development restrict the use of the property or the saleability of the property? How are these "intangible" issues addressed in any agreement?

Not all land uses are compatible nor can they be made compatible simply by introducing a few physical barriers. The solution to this problem lies in increased awareness and better planning.

Most Official Plans and Secondary Plans contemplate the interface between various uses and allow for transition zones between very incompatible uses. Why then, do municipalities allow themselves to be pressured into changing their Official Plans, particularly after much time and study is spent developing the Official Plans? Why do most municipalities require noise reports for new residential developments but not for new industrial developments?

Much is made of the issue that the MOE guidelines are just guidelines and therefore there is room for flexibility and interpretation. While this is true for many sources it does not hold true for industry. The primary reason is that industries are regulated under the EPA and the EPA is not a guideline, it is law. Unfortunately the EPA does not set the sound level limits with which the industry must comply, but rather refers to the Ministry of the Environment as the authority responsible for the issuance of C of A's. Therefore by default the MOE Guidelines are the documents which apply.

The final element in this complex equation is the resident. In evaluating the acoustical impacts of noise sources much importance is placed on the numerical analysis and whether or not the "sound level limits" can be achieved. There is merit and necessity in this approach; however, it cannot be the only component addressed. Ultimately the resident has the right to enjoy his/her property. While this is addressed

in the EPA, the mechanisms in place to ensure this right are riddled with holes. The province does not have a mechanism to ensure that industries requiring a C of A do in fact have one. The guidelines do not address maximum sound levels but rather averages over specified periods of time. The municipalities do not generally request noise/vibration reports for proposed industrial facilities. While Guideline D-6, "Compatibility between Industrial Facilities and Sensitive Land Uses", does recommend separation distances as well as mitigation between unlike uses, there is no mechanism to ensure this occurs.

One simply has to look at the number of Ontario Municipal Board (OMB) Hearings dealing with the issues discussed above to realize that there is definitely room for improvement in the way this complex issue is currently being addressed.

SOLUTIONS

In order to reduce the incidence of conflict a co-operative effort including the following is required:

- the MOE in conjunction with the municipalities must devise an approach to make stationary noise sources aware of the C of A process. This could be done as a requirement prior to the issuance of building permits; and

- acoustical consultants should have more regard for the MOE guidelines, not just the noise guidelines but also Guideline D-1, "Land Use Compatibility" and Guideline D-6, particularly in light of the implications to the homeowners and industries under the EPA.

- Municipalities need to be cognizant of the potential conflict;

- Municipalities need to ensure that their Official Plans and Secondary Plans reflect the potential incompatibility and allow for the appropriate buffer and transitional zones;

- Municipalities need to adhere to their Official Plans and Secondary Plans;

- Municipalities must ensure that new industries, prior to the issuance of building permits address the potential noise/vibration concerns;

Ultimately, the issues and solutions all boil down to money. In many cases the cost of land drives the final mitigative solution. However, the cost of the OMB hearing, lawyers, consultants, on-going complaint investigation, shut down of business, cost of litigation, the loss of enjoyment of property and continuation of land use compatibility must be factored into the formulation of a comprehensive solution.

REFERENCES

1. "Noise Assessment Criteria in Land-Use Planning, Publication LU-131", Ministry of the Environment, October 1997.

2. "Sound Level Limits for Stationary Sources in Class 1 & 2 Areas (Urban), Publication NPC-205", Ministry of the Environment, October 1995.

3. "Land Use Compatibility, Guideline D-1", Ministry of the Environment, July 1995.

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5. "Environmental Protection Act, R.S.O. 1990, Chapter E.19", Province of Ontario, May 1993.

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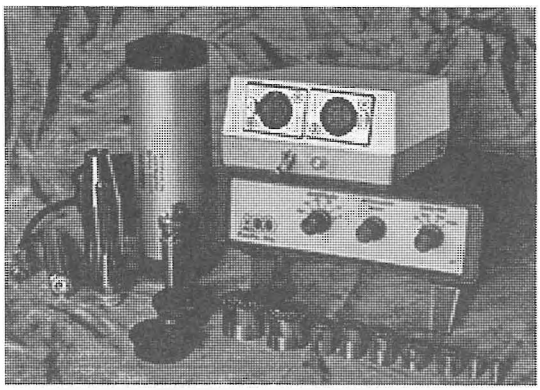

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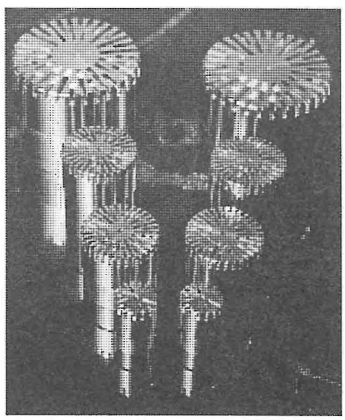

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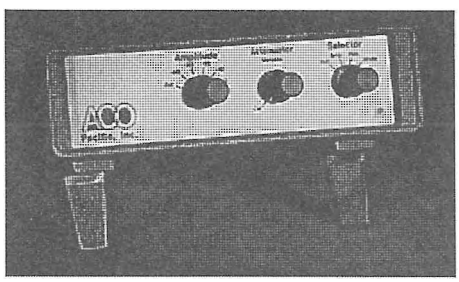

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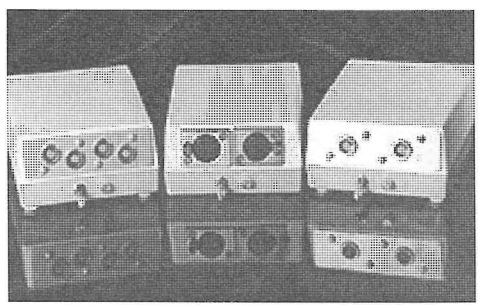

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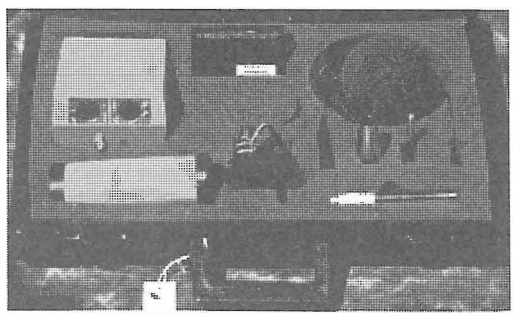

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