

# NOISE AND SUSTAINABLE DEVELOPMENT

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**Introduction** One of the key issues facing Australian cities is rapid and intensifying urban development. As residential densities increase and the pressures of urban development results in the incompatible placement of conflicting land uses adjacent to each other, there is increasing exposure of people to community noise. Combined with this is an increasing community expectation and demand for a higher standard of acoustic environment in their living and recreational places.

The impact of this increasing noise exposure is illustrated by the fact that noise complaints to government authorities in Brisbane have doubled in the last 5 years<sup>1</sup>.

Addressing noise issues at the planning stage of development is the most cost effective means of managing noise impacts, however, despite this fact noise is generally not well considered in the planning process and an end of pipe focus to noise management predominates.

The following paper outlines my practical experiences in trying to incorporate health based noise criteria into local government planning regulations and policies to achieve sustainable development.

**Noise and Sustainable Development** Noise and its impacts are often overlooked as an issue within the context of sustainable development. It is clear however, that if noise impacts are not appropriately managed in a rapidly developing urban environment, a significant proportion of the community is likely to be habitually exposed to high levels of intrusive community noise, decreasing quality of life and resulting in future health costs.

The success of achieving sustainable development with respect to protecting the values of the community's acoustic environment is dependent upon the incorporation of appropriate performance criteria in the development assessment process. This has not happened effectively to date as planning decision makers (the planners) and noise management decision makers (the regulators) generally operate independently of each other without effective coordination, communication or integration.

In many of the instances where noise is considered in urban planning processes, there has been a tendency to adopt complaint enforcement noise criteria, instead of specific planning design level noise criteria. Such complaint enforcement criteria are not always appropriate for the assessment and design of new development.

**Challenges to Using Health Based Noise Criteria in Practice** At Brisbane City Council an attempt has been made to incorporate health based noise criteria into urban planning and development assessment processes to protect the ability of future residents of new development to have sleep, relaxation and communication without unreasonable impact from intrusive community noise, within their homes. This approach has encountered considerable resistance by the development industry, politicians and some urban planners.

The following summarises the challenges that have been encountered with respect to incorporating health based noise criteria into regulations and policies for the assessment of development.

The primary objection to requiring developers to design new apartments and dwellings to achieve internal noise levels consistent with the World Health Organisation Guidelines for

Community Noise or Australian Standards for example, is the economic cost. It has proven very difficult to justify to developers, politicians and urban planners that the additional cost of reducing the exposure of future residents to high levels of community noise is warranted. In such circumstance noise and its impact is largely trivialised at the development industry and political level.

An additional challenge has been Brisbane's subtropical climate and outdoor lifestyle. Standard building construction in Brisbane has low sound insulation and relies on natural ventilation. Building construction adjacent to transport routes for example have not been able to achieve the desired internal acoustic criteria without all windows being sealed and air-conditioning being provided. This then brings the noise attenuation requirements into conflict with the Brisbane's Energy Efficiency objectives for reducing greenhouse gas emissions.

**Conclusion** It is important to consider the management of community noise within the context of sustainable development to protect the well being of future and existing communities from the negative impacts of habitual noise exposure.

Considerable resistance has been encountered from the development industry, politicians and some urban planners, to the incorporation of health based noise criteria into planning processes.

Political support is therefore essential if health based noise criteria are to be effectively incorporated within the development process.

There is a need for noise management professionals and policy makers to raise awareness and the profile of the significance of noise impacts with planning decision makers, politicians and the development industry.

## **References**

- <sup>1</sup>Brisbane City Council, *Brisbane Noise Management Strategy*, Brisbane City Council, 2002.  
Berglund, B, Lindvall, T, Schwela, DH, ed., *Guidelines for Community Noise*, World Health Organisation, Geneva, 2000.  
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