



# Management Policy on Community Noise to Improve the Quality of Life – Focused on Apartment Noise

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## ABSTRACT

Community noise (also called environmental noise, residential noise or domestic noise) is defined as noise emitted from all sources except noise at the industrial workplace. Main sources of community noise include road, rail and air traffic, industries, construction and public work, and the neighborhood. Typical neighborhood noise comes from premises and installations related to the catering trade (restaurant, cafeterias, discotheques, etc.); from live or recorded music; sport events including motor sports; playgrounds; car parks; and domestic animals such as barking dogs. Recently, in South Korea, disputes over the neighborhood noise (especially, apartment noise) lead to murder cases as the number of residents who live in the apartment complex is on the rise. The problem has emerged as one of the major social issues and making efforts for solution is needed. This study suggests methods for prevention and post management systems to improve the quality of life and it is expected to handle the apartment noise more active.

Keywords: Community noise, Apartment noise, Management policy

## 1. INTRODUCTION

It is important to minimize the noise in an interior space which is for rest and sleep in order to improve the quality of life. In particular, there is a need for a systematic management to the noise between neighborhoods because it is harmful to the quiet or calm environment and it can cause a violence or murder.

We analyzed the WHO's regulation standard on the noise (residential, interior), neighborhood noise in the UK, and the current status and implications of the apartment noise in South Korea that can affect life. Ultimately, we propose the management system on the apartment noise which can be a socially serious problem as the percentage of apartment residents increases.

## 2. Management Policy and Implications on the Community Noise

### 2.1 WHO (World Health Organization)

Table 1 presents the WHO guideline values (1999) according to specific environments and critical health effects. The guideline values consider all identified adverse health effects for the specific environment. In dwellings, the critical effects of noise are on sleep, annoyance and speech interference. To avoid sleep disturbance, indoor guideline values for bedrooms are 30dB LAeq for continuous noise and 45dB LMax for single events. The maximum sound pressure level should be measured with the instrument set at "Fast" (1).

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Table 1 - Guideline values for community noise in specific environments (Indoor)

Specific environment	Critical health effect(s)	LAeq [dB(A)]	Time base [hours]	LAmx, fast [dB]
Dwelling, indoors	Speech intelligibility & moderate annoyance, daytime & evening	35	16	-
Inside bedrooms	Sleep disturbance, night-time	30	8	45

## 2.2 UK

The UK considered the noise as one of Anti-Social Behaviors and the country has been carrying out various campaigns since 2003. In addition, the country enacted the Noise Act in 1996 (4) in order to control and regulations on the disputes caused by the noise.

The Noise Act 1996 to make provision about noise emitted from dwellings at night. "night hours" means the period beginning 11 pm and ending the following 7 am between two hours due to noise-induced damage to a neighbor who reported a lift chair from the competent authority, if the noise processing personnel at the victim's home should be informed that the noise that can be terminated within 10 minutes after receiving a warning alert (warning notice) that may be causing the noise and neighborhood noise levels at the same time violating the law, based on a measured value (or a personal judgment) and . Meanwhile, he received a warning from the relevant personnel who are responsible for noise-induced (any person who is responsible for noise) is guilty of a charge of noise on the basis of this Law, the penalty will be processed under Level 3. If not corrected here, and impose heavy fines of up to £ 1,000 after the first noise measurements at 100 pounds warning (Fixed penalty), penalties are.

On the other hand, in the case of Leeds City has established a 24-hour Hotline system is responsible professionally noise problems between neighbors. Thus comes the noise is reported to staff immediately (Environmental Health Officer) and to handle the problem within one hour (5). However, this system is a situation that is not yet being carried expanding across the UK.

## 2.3 Implications

The situation in the major countries, including the United Kingdom and the regulations to prevent noise-induced sustained enough to interfere with the lives of others by anyone, and especially focuses on the neighbors about noise at night in British regulation zone. Further, in the body, taking into account the influence of the noise WHO presents life noise regulation standards and has been actively conducted research on human hazards of noise recently in Europe.

Regulatory standards should be established taking into account the effects of human exposure to noise, and thus to the calmness living room. In particular, there is a need for regulation and punishment for the act itself, for the noise of the night zone, which is directly related to sleep.

## 3. South Korea and the United Kingdom living room noise-relates status

### 3.1 Korea (multi-unit complex)

Live in public housing more than 60% of the people, not worn slippers are likely due to apartment noise dispute arise, depending on the room that the sedentary culture in Korea. Here, the present invention can be classified into the floor impact sound generated impact applied to the structure such as a wall Electronics airborne sound generated from the noise and the interlayer.

Looking at the source of the noise, and inter-layer accounts for more than the floor impact sound generated by the jog 70% of children and occurs in the generation of non-specific, including both upper and lower level neighbor it is difficult to solve. In addition, accounting for the majority of the time zone and sleep at night to take a break and damage is concentrated in the outer zone activity is less winter damage.

### 3.2 UK (Neighbor noise)

At least three million UK adults currently suffer from noisy neighbors but more than a third fail to take action, according to research. Loud voices or arguing from the neighbors was the most disturbing noise (58%), followed by blaring music or televisions (40%), the poll for Which? Legal Service found.

A quarter (26%) of those affected were disturbed by doors slamming, 15% suffered due to regular parties. People stomping around, pets, DIY noise, musical instruments and ball games also rated among the most annoying neighborly noises. Among those who reported noisy neighbors, six in 10 lost sleep, while others said the disruption made them irritable, angry or stressed. One in 10 sufferers saw their work or health affected. However, 36% made no effort to address the problem. Less than a third spoke calmly to their neighbors about the issue and just a quarter contacted their local authority. Arguments developed among 8% of neighbors, while 7% moved house to escape the noise (2).

The following Figure 1 is recommended by the British government between neighboring noise dispute resolution procedures (3).

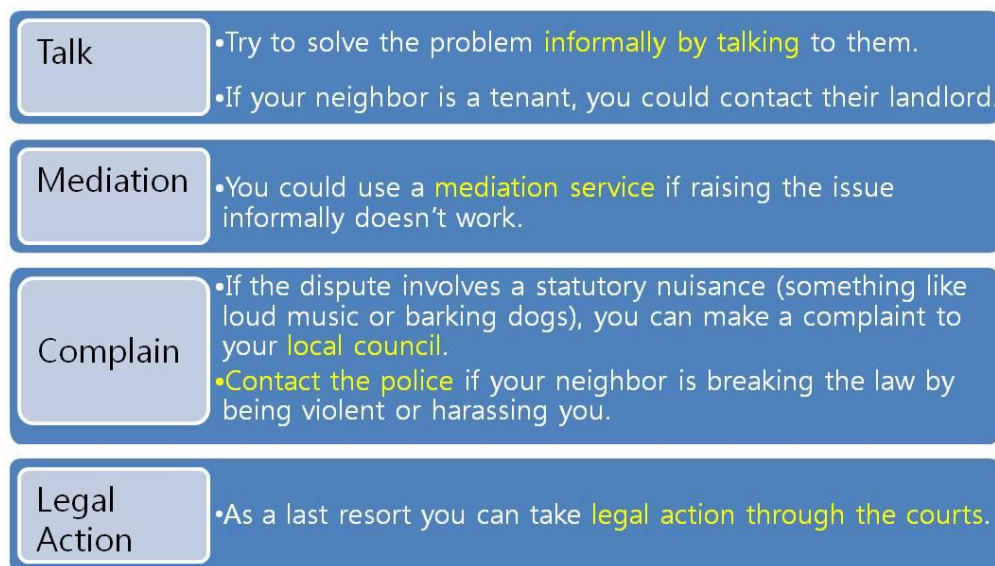


Figure 1 – Resolving neighbor disputes

#### 4. Management policy of Apartment noise

In order to mitigate the apartment noise dispute is necessary proactive management and follow-up as follows:

##### 4.1 Proactive management

The dispute is expected to be apartment noise, or when there is less risk to actively participate in the prevention of conflict. For public housing, the calmness, and indoor sound environment should be designed with the interlayer before construction noise prediction. Also, ensure that you continue to be a tenant in the case of reduced performance after physical performance standards for noise abatement interlayer phase as well as for approval before construction, through the inter-generational understanding the current status of each noise monitoring in real time and get the DB should be able to respond effectively to the initial apartment noise caused by conflict in the future.

##### 4.2 Post Management

Such as murder should occur due to noise dispute recognized by anti-social behavior and apartment of noise and enhance the punishment for it. For example, it is necessary to support this policy, including provisions to allow for penalties to improve misdemeanor depending on the degree of damage to the victim when the police were called in to report on. In addition, it is important to ensure objectivity because of the strong tendency is subjective, depending on inter-individual differences in the noise. Providing easy access to the tools that are required to objectively apartment noise victim to self-diagnose it. It is possible to reduce the unnecessary consumption of competent personnel it is possible to judge by checking whether or not the apartment noise exceeds regulatory requirements through the self-test can determine objectively the degree of damage, and whether complaints.

## 5. CONCLUSIONS

Examined for noise that can affect indoor life in an effort to improve upon the quality of life. In order to mitigate the apartment noise dispute at issue in the case is a high proportion of public housing resident is Proactive management is important, it is important that appropriate measures early in the event of a dispute about the need to regulate the inter-and post-noise act itself.

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