

Sound quality – the contradiction

They are all into sound quality. Another conference here, a new book there. Noise – vibration – harshness (NVH) is the big thing for vehicles. Make it sound like the customers want it to sound and they will buy and buy.

Sound quality is most definitely in the mode... except for one important area. Environmental noise, where A-weighted equivalent level (L_{Aeq}) continues its convenient dominance.

This is the great contradiction in our approaches to noise. When we want to sell something we make it sound good. But when we want an environmental criterion we suppress all the sound quality by averaging over long periods and take no account of what it actually sounds like. We rate intermittent noise in the same way as

we rate continuous noise. We suppress low frequencies. We suppress the information carried by fluctuations. We throw out the recognised subjective contributors to sound quality, whilst assuming that those exposed to the noise have brains like buckets of water.

Drip, drip, splash, splash, whoosh... it all goes into the L_{Aeq} bucket. It's of no concern how the bucket is filled, all we need is the final level and how long it took to fill. And there we have it... L_{Aeq} .

Our legislators and decision makers must relinquish the comfort given them by L_{Aeq} criteria, behind which they hide at the first mention of noise. It is time to send them a clear message:

Put some quality into environmental criteria.

Ulster airports

The Government has admitted that Northern Ireland's main airports could improve on noise pollution levels. Unveiling a publication of guidance for the assessment and management of noise around Northern Ireland airports, NIO Minister John Spellar said that while it was clear from the report that noise pollution was not as severe as many other airports, there was scope for improvement in the management of noise. The Minister added: "The 'Good Practice Guide' published today will provide the necessary framework for delivering improvements in the assessment and management of aircraft noise at Northern Ireland's airports. "My Department now intends to contact each of the Northern Ireland airports to encourage them to convert the published guidance into firm action plans. We will also wish to work closely with the airports to ensure that more meaningful and transparent monitoring arrangements are introduced for the benefit of local residents and other interested parties. "In addition, the Department will be reviewing the existing airports legislation with the aim of strengthening it where necessary." The publication of the 'Good Practice Guide' follows the completion of a review of noise pollution at Northern Ireland airports undertaken for the Department for Regional Development by Professor Callum Thomas, of the Centre for Aviation Transport and the Environment, at the Manchester Metropolitan University.

noise notes

Moscow Din

Less than one-third of Moscow residences are located in areas quiet enough to live, city officials said recently. The ceaseless roar of cars and trucks trundling along the city's streets may pose serious dangers to residents' health, while places to escape the noise are few and hard to find. Traffic noise is the worst along the congested Garden Ring, Prospekt Mira, Leningradskoye Shosse and the city's other main thoroughways, which grow quiet only for a few hours late at night, if at all. "It's the same on every major street," said Irina Veretina, acting deputy chief of the noise-control department of Moscow's health inspectorate. Other notorious areas are some of the older streets, such as Begovaya, where residential buildings stand only 5 meters from the road, and noise in lower-floor apartments can be nearly deafening. In addition to being annoying, incessant traffic noise can cause myriad health problems, including psychoneurotic disorders, asthenia, general weakness, irritability and dizziness attacks, according to a report by the health inspectorate. Constant noise can cause sleep disorders and heart problems, including ischemia. The ill effects are further aggravated when the noise combines with Moscow's polluted air to undermine the immune system, according to the report. "The noise affects first of all children and the elderly," although young healthy adults may also suffer ill effects, said Ruslan Gildenskiold, head of the municipal hygiene department of the Erisman Research Institute in Moscow. Between 70 percent and 80 percent of Muscovites live in areas where traffic noise is too loud, according to estimates by health officials, but in keeping with the Russian tradition of accepting life's difficulties as they come along, many seem to think there is no escaping the noise. "I know it's probably not good for me, but what can I do?" said Mikhail Antonov, a 66-year-old resident of a brick building on the busy Leningradskoye Shosse. In a tree-shaded courtyard behind the building, 75-year-old Nina Novikova was taking refuge from the noise that permeates her apartment from early in the morning. "I need quiet, but there is no quiet," Novikova said. "We are sick and tired of all these cars, especially in the summer, when people go to their dachas." Leningradskoye Shosse is the main route for people heading out of Moscow to northern suburbs on Friday and heading back to the city on Sunday night. During rush hour, which can last for hours on end both in the morning and the evening, cars are often jammed together nearly bumper to bumper, horns blowing and engines running. Given the high levels on noise in most of the city, the number of complaints is relatively low, Veretina said. "People get used to traffic noise easier than they get used to noise from other sources, such as industrial enterprises," she said. Most of the complaints her agency receives are about too much noise from a neighbourhood factory, she said. "These are actually easier for us to deal with. We can issue orders to the enterprise [to turn down the volume] and the order is obeyed. "But we cannot ban road traffic," Veretina said. Noise levels around main streets are 20 to 25 decibels higher than the norm, which has been set at 30 decibels for nights and 40 decibels for the daytime, Veretina said. On the most congested streets, noise levels can reach nearly 90 decibels, according to health inspectorate figures. Health officials refused to identify any particular quiet neighbourhoods that are good to live in, but said that small oases are scattered throughout the city. One option for those who choose to live near a major road is to find an apartment that faces a backyard. There, noise levels can drop to the acceptable level or just a few decibels above it, Veretina said. For those whose apartment faces the street, the best solution may be to install soundproof windows and air conditioning, Veretina said, but this option is too expensive for many Muscovites. When a new road is being built in Moscow, city authorities now install insulating window packages in the apartment buildings where residents would be affected by the increased traffic. Those who live along older roads have to keep suffering from the noise – or spend their own money on soundproof windows.