

# Town and Country

Those who live in urban areas, or town centres, accept noise as part of life. Many are bothered by transportation noise, particularly from roads and aircraft, whilst others live alongside railway lines – some by choice, or at least forced choice, in view of the new housing developments which spring up alongside railways, not forgetting the many rail-side housing developments throughout the last century. We are also moving increasingly into the 24 hour society. Supermarkets that never close, late night public transport and liberal licensing laws

Residents near airports may not like their noise but, for example, if they complain of early morning flights, the response might be that these courier planes landing from North America are essential for the country's economy. It is the only way to get vital documents to their destination by start of work etc etc. The disturbance arises from fulfilment of a national need and has to be accepted for the good of us all.

When criteria are set for limiting noise, the criterion level is usually such that 10% to 15% of the population

continue to be annoyed. Consider the standard curve for growth of complaints with noise level, across which a legislator draws a line and says. "That's it. Above the line we'll help them out, but below the line they'll have to live with it. It will be far too difficult and expensive to reduce noise for everybody, and if high levels of traffic noise are affecting your health and making it a bit more likely that you will develop a heart problem, that's tough. What do you expect if you live on a busy road in a town?"

A difficult question which is currently arising is: Should country dwellers expect to be immune from new noise sources resulting from recognition of a national need and implementation of procedures to meet this need?

For example, will they be told that to satisfy national energy requirements, they have to accept, say, the 40dBA and visual intrusion from new wind turbines. They may not like this, but neither do the residents near airports like what they are increasingly exposed to, in the national need.

#### ACOUSTIC SIDE BRANCHES

Vibration problems at a North America nuclear power plant have been significantly reduced, thanks to state-of-the-art technology that corrects the piping's "harmonic imbalance." During a scheduled refuelling outage of the Unit 2 reactor this month, 12 devices – called acoustic side branches – were installed on the reactor's main steam piping to curb the vibrations, reducing the problem by more than 50 percent, plant spokesman Bill Stoermer said. This marks the first time these devices have been installed in an operating nuclear power plant in the United States, and nuclear power leaders hope the solution can help other plants with the same problem. "The results have exceeded all expectations," plant vice president Tim Tulon said. "Unit 2 has the most technically analysed steam piping system in commercial operation today." The vibrations apparently surfaced in 2002 after the plant implemented an extended power uprate—an additional 100-megawatt power surge to allow the reactors to create more electricity, officials said. Although the safety of the plant's operations was not impacted, it did cause some abnormal wear on certain plant mechanisms, Stoermer said. It also caught the attention of Edward McGaffigan, one of five U.S. Nuclear Regulatory Commission members charged with setting nuclear power policy for the entire nation. He recently travelled to the plant to learn more about vibration issues. During his visit, McGaffigan said the local plant is at the cutting edge of resolving the problem. Technical experts from across the nuclear power industry helped make the improvements, including conducting engineering analysis, design reviews and plant modifications, officials said. The reactor unit has now returned to service with 156 monitoring devices installed on various plant piping, providing vibration data to the plant.