



## Noise pollution: separate regulations needed for construction

**In a new study**, Spanish researchers describe a method specifically designed for measuring and characterising noise from building sites. They claim the method could help shape future policy related to noise pollution caused by the construction industry and provide important information to help reduce construction noise.

**Several EU directives** are concerned with noise pollution and focus on reducing noise from specific sources, mainly road and air traffic<sup>1</sup>. Council directive 70/157/EEC, for example, sets sound level limits for motor vehicles. However, in most European countries there is no specific legislation governing noise caused by the construction industry, although there is such legislation in the USA. The researchers argue that more specific policies are needed to regulate construction noise and those affected by it, because it has a unique nature and potential for causing annoyance, and also because it is generally a temporary disturbance,.

In developing their methodology, the researchers used a typical building site in Spain as a case study, where a block of 26 flats was being constructed. To avoid interference from traffic, they chose a site outside the city centre and away from any noisy roads, so they could generate a profile of construction noise at the site over a 16 month period. They measured sound levels and frequencies at defined points at the edge of the site every week, at four different points simultaneously and at approximately the same time each week.

They divided the construction process into five separate stages – excavation, frameworks and walls, walls and brickwork, facilities and roof – based on consultations with building professionals. The researchers concluded that noise profiles were fairly similar for each stage, except the initial excavation stage which uses heavy machinery and so is much noisier. Noise during the frameworks and wall stage made the deepest noise and therefore had the highest potential to cause annoyance. Grinding machinery was used sporadically during the roof stage, making noise pollution intermittent.

The researchers concluded noise on the site in question was within the appropriate levels, noting that construction workers were probably exposed to higher noise levels than those measured. However, they argue that the very particular type of noise produced by construction work – characterised by low frequency (making a deep noise) and intermittency – means it deserves special attention in policy making. Current noise laws, they say, do not take into account the specificity of this kind of noise. By contrast, they consider New York City regulations<sup>2</sup> to be very effective, as they are designed specifically with construction noise in mind.

1. See: <http://ec.europa.eu/environment/noise/sources.htm>
2. See: [http://nyc.gov/html/dep/pdf/noise\\_code\\_guide.pdf](http://nyc.gov/html/dep/pdf/noise_code_guide.pdf)

**Source:** Ballesteros, M.J., Fernández, M.D., Quintana, S. *et al.* (2010). Noise emission evolution on construction sites. Measurement for controlling and assessing its impact on the people and on the environment. *Building and Environment*. 45: 711-717.

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**Theme(s):** Noise