

## ABSTRACT

### **VALIDATION OF THE PROPOSAL APPROVED FOR DE EXECUTIVE'S COUNCIL OF GENERALITAT, GOVERNMENT OF CATALONIA OVER THE LAW OF PROTECTION AGAINST THE NOISE.**

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The mobility and the wide range of humans activities that we can develop on urban areas involve noise pollution problems which can cause nuisance to citizens. People is more sensitive to noise every day and understand that the protection against noise pollution is a quality life factor which we need to obtain in order to their intimacy and comfort is affected. Noise is a phenomenon that produce a sensation considered unpleasand and can produce physiological, sociological and pathological effects on people in more or less measure; then, it should be corrected or minimised as much as possible.

This dissertation analyse transport infrastructures in the context of environmental noise pollution (vehicles, trains and aeroplanes) and the measures that we should take in order to reduce their effects. The city of Reus, with all the typical infrastructures available, is tested so as to see in which extent the new law of protection against the noise pollution- which came into force the last October to give an answer to environmental noise pollution- is feasible.

The most important infrastructures which are a source of noise pollution have been studied, distinguishing between access road to the town, urban transit, (internal axle and tomb de Ravals), railway and air transport. A fieldwork have been realised, consisting in measuring sound levels by means of a high precisseness soundmeter in the most significant points of the town, in different strips hours, day and night, always bearing in mind the time of maximum traffic. After characterise the acoustics of the streets, we have to come to partial conclusions about every typology of traffic existing. We describe the measures that we have to take into account to develop a correct environmental management (from the establishment of the legal framework, to a correct planning and the promotion of social initiatives, all this without forgetting the economical provision which it should be considered in order to take long-awaited performance. Also, we define the necessary decisions that would be suitable for fighting against noise, acting on loud sources, spreading environments ( reducing through of roadsurface, acoustic barrier or proceedings on houses ) or receiving sources.

Some conclusions are extracted of the city of Reus, differentiating the acces highway, the most important streets, internal axle, "tomb de Ravals" and railway. All of them contribute to bring a solution to environmental noise pollution taking into account aspects of internal and external mobility, road surfacing, traffic lights, residential areas, intermodality concepts, signposting, industrial areas distribution, and urban planning. On the whole, the experience obtained in Reus permits us to jump to conclusions about the solutions of the problems which can show up other cities with similar features, what is more to give us a useful dimension and viability of this dissertation and the law about noise protection.

Tu sum up, the dissertation show entirely off the importance of urban planning, territorial analysis and the design of road infrastructures and transport to reduce noise pollution from the beginning, since the project genesis.