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Comparative Study – Health Research on Traffic Noise Pollution Vs. Technical Research on Traffic Noise Mitigation

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ABSTRACT:

Community awareness and the perception on the traffic noise related health impacts have increased significantly over the last decade resulting in a large volume of public inquiries flowing to Road Authorities for planning advice. Traffic noise management in the urban environment is therefore becoming a “*social obligation*”, essentially due to noise related health concerns. Although various aspects of urban noise pollution and mitigation have been researched independently, an integrated approach by stakeholders has not been attempted. Although the current treatment and mitigation strategies are predominantly handled by the Road Agencies, a concerted effort by all stakeholders is becoming mandatory for effective and tangible outcomes in the future.

A research project is underway at RMIT University, Australia, led by the second author to consider the use of “hedonic pricing” for alternative noise amelioration treatments within the road reserve and outside the road reserve. The project aims to foster a full range noise abatement strategy encompassing source, path and noise receiver. The benefit of such a study would be to mitigate the problem where it is most effective and would defuse traditional “authority” boundaries to produce the optimum outcome. The project is conducted in collaboration with the Department of Main Roads Queensland, Australia and funded by the CRC for Construction Innovation.

As part of this study, a comprehensive literature search is currently underway to investigate the advancements in community health research, related to environmental noise pollution, and the advancements in technical and engineering research in mitigating the issue. This paper presents the outcomes of this work outlining state of the art, national and international good practices and gap analysis to identify major anomalies and developments.