

Road Traffic Noise Mapping for Riyadh City Using GIS and Lima

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Abstract : The primary objective of this study is to develop the first round of road traffic noise maps for Riyadh City using Geographical Information Systems (GIS) and software LimA 7810 predictor. The road traffic data were measured or estimated as accurate as possible in order to obtain reliable noise maps. Meanwhile, the attributes of the roads and buildings are automatically exported from GIS. The simulation results at some chosen locations are validated by actual field measurements, which are obtained by a system that consists of a sound level meter, a GPS receiver and a database to manage the measured data. The results show that the average error between the predicted and measured noise levels is below 3.0 dB.

Keywords : noise pollution, road traffic noise, LimA predictor, GIS

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