

Investigation of the Noise Reduction Provided by Bush Belts in Konya, Turkey[#]

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Abstract: This study investigated to noise reduction effect of bush belts. A point source of noise was positioned in front of the bush belts and the noise level at various points in the belts was measured with a noise meter. At the distance of 7 m from the source, the noise value was 72 dB(A) in the control area, which was reduced 65.7 dB(A) *Berberis thunbergii* D.C.–*Pyracantha coccinea* M. areas, with the reduction rates of 6.3 dB(A) compared to the control. At the distance of 11 m from the source, the noise value was 65.1 dB(A) in the control area, which was reduced 56.6 dB(A) *Spirea vanhouetti*–*Cotoneaster dammerii* C.K.–*Pyracantha coccinea* M. Areas, with the reduction rates of 5.5 dB(A) compared to the control. At the distance of 22 m from the source, the noise value was 59.8 dB(A) in the control area, which was reduced 53.6 dB(A), *Cotoneaster dammerii* C.K.–*Juniperus horizontalis* L.–*Spirea vanhouetti* Briot., with the reduction rates of 6.2 dB(A) compared to the control. From the results of the study, it was suggested that for the noise pollution from the traffic flow on the roads, in especially the big cities, noise reduction zones with suitable bush plant species should be formed along roads of the cities.

Key words: noise, greenbelt, bushes, open area, road, Konya

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