

Traffic Noise Level at Seksyen 7, Shah Alam

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Structured Abstract

Background: Urbanization in Malaysia is projected to rise by 2030, increasing traffic, congestion, and noise pollution. Areas with high traffic volumes, such as tourist and business zones, experience greater noise levels, which are linked to increased vehicle numbers. Therefore, noise pollution leads to various health problems. This study aims to identify the traffic noise level in Seksyen 7 by using the Sound Level Meter and its correlation between the time of sampling and the location.

Methods: The Sound Level Meter (SLM) was calibrated before usage. The traffic noise level was then recorded using the calibrated SLM, and at the same time, the number of vehicles passing by was counted with a counter meter. At the end of each day, the SLM was recalibrated after use. After that, all the recorded data were analyzed by using Microsoft Excel and Statistical Package for Social Sciences (SPSS) for an independent-samples t-test analysis.

Results: This study shows that, at the Average Traffic Noise Level, LAeq on weekends was higher than on weekdays at both locations A and B. Next, the LAeq was compared between the morning and afternoon for each location on weekdays and weekends, and the results showed no differences. This was supported by the statistical analysis, which showed no significant variation between morning and afternoon ($p\text{-value} = 0.502 > 0.05$) and a mean difference of -1.2. Additionally, Location A (high-traffic) has a higher LAeq in both the morning and afternoon than Location B (residential-commercial). The statistical analysis has shown a significant difference in the means of the locations ($p = 0.001 < 0.05$), with a mean difference of 3.94.

Conclusion: The findings of this study indicate that location-dependent noise pollution exceeds regulatory standards, emphasising the urgent need for mitigation near schools.

Keywords: Traffic Noise, sound level meter, Seksyen 7 Shah Alam, LAeq

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