

UNIVERSITI TEKNOLOGI MARA

**A STUDY ON CONSTRUCTION SITES AND ITS
NOISE IMPACT TOWARDS RECEPTOR
POPULATION IN UITM PUNCAK ALAM**

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**Project paper submitted in partial fulfilment of the requirements for
the degree of Bachelor in Environmental Health and Safety (Hons.)**


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Declaration by Student

Project entitled "A Study On Construction Sites And Its Noise Impact Towards Receptor Population In Uitm Puncak Alam" is a presentation of my original research work. Wherever contributions of others are involved, every effort is made to indicate this clearly, with due reference to the literature, and acknowledgement of collaborative research and discussions. The project was done under the guidance of Mr. K. Subramaniam as Project Supervisor and Mr. Mohd Izwan bin Masngut as Co-supervisor. It has been submitted to the Faculty of Sciences in partial fulfilment of the requirement for the Degree of Bachelor in Environmental Health and Safety (Hons.).

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ABSTRACT

A Study on Construction Sites and Its Noise Impact Towards Receptor Population in UiTM Puncak Alam

Introduction: Noise is a sound, especially one that is loud or unpleasant or that causes disturbance (Oxford, 2011). We are constantly exposed to noise in our daily live and excessive noise can seriously harms human health and interferes with human daily activities. Construction industries is one of the job that most likely to involve noise which create risk not only for the construction workers, but also for the public, while UiTM Puncak Alam campus is a place of education where student require a degree of concentration in order to study.

Methodology: This study was conducted in two construction sites of UiTM Puncak Alam campus at the phase two of zone one (at the northwest construction site and southwest construction site) which is in the southern city of Puncak Alam, Mukim Jeram, Kuala Selangor (3° 11'51.71" N, 101° 26'54.45" E). The study design of this study is cross-sectional study. Sampling data collection used are questionnaire and measurements (source areas and at receptor areas). For descriptive analysis, Microsoft Office Excel 2003 was used, while a statistical package for the social science (SPSS) version 17.0 was used for statistical analysis.

Results: The findings of this study showed that all 8 readings of noise level at source areas are above the standard limit for daytime set by DOE (2007), at 50 dB(A), while 26 out of 30 sampling points at receptor areas are above the standard limit, while another 4 sampling points are below the standard limit. The noise patent has been seen to be repeated impulses. Meanwhile noise mapping showed that the level of noise within 200 meter radius was above the standard limit, where the level of noise is getting lower when the area is sited at a distance away from the noise source or in the area where it is at a higher level. There is a high reading of noise level at the boundary of construction site in UiTM Puncak Alam campus since there is a significant difference (p -value < 0.001) between noise level at source area and receptor area 1 (college) (mean=72.06, 52.23) and between noise level at source area and receptor area 2 (faculty) (mean=72.06, 61.21). There is a high level of noise at the faculty since there is a significant difference (p -value < 0.001) of noise between the two receptors, at college (mean=54.49) and at the faculty (mean=60.99). Noise at receptor areas 1 (college) and receptor areas 2 (faculty) does not give any impact on daily activities and their health (p -value > 0.05) but noise at source areas does give impact to health problem (p -value < 0.05).

Conclusion: In conclusion, eventhough readings at most of sampling points are above the standard, but level of noise at receptor area 1 (college) is lower than level of noise at receptor area 2 (faculty), which does not give impact to health problem and interruption to community's daily activities. However, a high reading of noise level at the boundary of construction site (noise at source) in UiTM Puncak Alam campus might give impact on the community's health but not interrupt the daily activities of the community.

Keywords: noise, environmental noise monitoring, community survey