



اَوْنِيُوْرَسِيْتِي تِيكْنُوْلُوْجِي مَارَا
UNIVERSITI
TEKNOLOGI
MARA

**PROGRAM OF QUANTITY SURVEYING
DEPARTMENT OF BUILT ENVIRONMENT STUDIES AND
TECHNOLOGY
FACULTY OF ARCHITECTURE, PLANNING AND SURVEYING
UNIVERSITI TEKNOLOGI MARA PERAK BRANCH**

TOPICS:

**ENVIRONMENTAL IMPACT OF
CONSTRUCTION ACTIVITY EFFECTED
TO THE RESIDENTIAL AREA IN
SELANGOR.**

Dissertation submitted in partial fulfilment
of the requirement for the award of
Bachelor of Quantity Surveying (Honours)

**PREPARED BY: SITI MANISAH BINTI MOHD MAZNI (2019848472)
SEMESTER: SEPTEMBER 2019 – JANUARY 2022**

Abstract

In an era of the world population's unprecedented urbanization, numerous industrial constructions were executed to increase economic development in Selangor. By reason of this, the construction industry acts as a vehicle for economic development by providing various facilities and infrastructure for a decent lifestyle. Nevertheless, construction activities involved in the development are acknowledged as the major sources of nuisances and pollutions that emerged in the urban areas as it is involved with various physical activities. The residents near the construction site are affected by that pollution in health problems and disturbances. This study is conducted to identify the effect of each pollution on the residents and identify the type of site construction that contributes to pollution. In achieving the objectives, a quantitative approach was adopted for the study, and a well-structured questionnaire survey was performed in the residential area in Rawang, Selangor. About 205 residents have contributed and responded to the questionnaire given. The Snowball sampling method is used in selecting the respondent to distribute the questionnaire survey to the population involved. Next, the data obtained from the questionnaire survey is analyzed by using SPSS and descriptive analysis. According to the analysis, most of the residents nearby lost their daily peace because of the traffic congestion due to the heavy machinery used for the site activities. Also, this study shows that excavation and earthmoving activities are the most adverse impact that affected the residents nearby. To overcome the pollution, occur due to the construction activities, the findings of the study have proposed a few suggestions and opinion from the residents who are participating in the questionnaire survey. Site Environment Practices implemented by all stakeholders involved in the particular project will reduce the adverse impact to the residents for the harmoniously quality life.

Acknowledgement

In the name of Allah, the Most Gracious and the Most Merciful.

All praises and glory to Almighty Allah SWT for lending me strength, ability, and inspiration to complete this final project or dissertation in time. My heartfelt gratitude to the Prophet Muhammad (Peace be upon him), whose way of life has been a constant source of guidance for me.

This dissertation involved many people who contributed to the complete process to make it possible until the end. First and foremost, I cannot fully express her deepest gratitude to my thesis supervisor, who has been assisting and giving helpful advice for the improvement and the completion throughout my thesis process.

Debt gratitude to all 206 respondents involved who have spent their precious time in taken part in my questionnaire survey despite their hectic schedule and situation. The involvement has given a major contribution to make this thesis achievable.

I express a sincere appreciation to my parents and family members who deserve special acknowledgement for their unwavering support and prayers. Their endless support during my thesis writing has encouraged and led me to perform the best I could to make this piece of research exist.

Last but not least, my most enormous thanks to all my classmates and friends who always willing to give countless cooperation and solutions by sharing their ideas, information, and advice throughout the writing process. I am sincerely grateful for all the support and blessings that I received.

LIST OF TABLES

Table 2.1. Summary of Environmental Impact as retrieved from different literature review	13
Table 2.2.	19
Summary of Impact affected to the residents as retrieved from different literature review	19
Table 2.3.	22
Summary of sources and factors of environmental impact caused by construction as retrieved from different literature review	22
Table 3.1 is population for Rawang, Selangor.....	31
Table 4.1: Research questions and objectives number 1, 2 & 3.....	35
Table 4.2. Response rate.....	36
Table 4.3: Demographics of respondent	37
Table 4.4. Likert scale used to determine the level of frequency of environmental impacts to the residents	38
Table 4.5. Table ranking of environmental impact caused by construction activities ...	40
Table 4.6: Effect of air pollution caused by construction activities	43
Table 4.7: Effect of noise pollution caused by construction activities.....	45
Table 4.8: Effect of waste pollution caused by construction activities	47
Table 4.9: Effect of water pollution caused by construction activities	49
Table 4.10: Effect of traffic pollution caused by construction activities	50
Table 4.11.....	52
Ranking of effect caused due to Air pollution, Noise pollution, Waste pollution, Water pollution and Traffic pollution.	52
Table 4.12. Likert scale used to determine the factor contribute to the environmental impacts to the residents	55
Table 4. 13. Factors of environmental impact that caused by construction activities ...	56

CHAPTER 1

INTRODUCTION

1.1. BACKGROUND OF THIS STUDY:

As the world's population continues to grow, many developing countries' housing shortages have reached critical proportions. As a result, the structure was built quickly in order to meet human demands. The majority of the buildings have been completed in metropolitan regions since demand and price are higher than in rural areas. However, the building industry is recognized as one of the most significant sources of pollution and risk to the ecological, sociological, and economic systems surrounding the construction project. The pollution and hazards affected, such as dust, noise, harmful gas, chemical and messy sites, disturb the peaceful resident nearby (Zolfaghrian et al 2012).

Aside from that, because construction activities necessitated massive machinery to complete the project, it caused annoyance to the neighbors due to noise and damage to the road near the site. Also, some construction materials such as concrete, flooring, painting, blazing, and others contain high Volatile Organic Compound (VOC) and Chlorofluorocarbon (CFC) will harm the surrounding, as a result, residents are subjected to air and dust pollution. Furthermore, poor construction design results in overconsumption of natural resources, deterioration of social health, and the annihilation of life. This problem arises as a result of a lack of technology systems, a shortage of workers and specialists, deteriorating health status, bad management, a lack of environmental awareness, and increased administrative costs.

One of the construction activities that caused environmental impact is excavating. During the excavation process, the machine used such as excavator, roller, and blasting will cut, remove and prepare the soil. As a result of these activities, the emission of greenhouse gas (GHG) occurs. Greenhouse gas includes carbon dioxide (CO₂), methane (CH₄), and nitrous oxide (N₂O) that leads to air pollution and affects the residents nearby and workers involved. Another material construction that emits