



**DEPARTMENT OF BUILDING
UNIVERSITI TEKNOLOGI MARA
(PERAK)**

REFURBISHMENT WORK

**Prepared by:
NOR HIDAYAH BT SATIMAN
2011188131**

**DEPARTMENT OF BUILDING
FACULTY OF ARCHITECTURE, PLANNING AND SURVEYING
UNIVERSITI TEKNOLOGI MARA
(PERAK)**

APRIL 2014

It is recommended that the report of this practical training provided

By

Nor Hidayah bt Satiman

2011188131

entitled

Refurbishment work

accepted in partial fulfillment of requirement has for obtaining Diploma in Building.

Report Supervisor

En. Mohamed Rizal Bin Mohamed

Practical Training Coordinator

Sr. ~~Anas~~ Zafiro Bin Abdullah Halim

Faculty Coordinator

~~Dr.~~ Mohd Rofdzi Bin Abdullah

DEPARTMENT OF BUILDING
FACULTY OF ARCHITECTURE, PLANNING AND SURVEYING
UNIVERSITI TEKNOLOGI MARA
(PERAK)

APRIL 2014

STUDENT DECLARATION

I hereby declare that this report is my own work, except for extract and summaries for which the original references stated herein, prepared during a practical training session that I underwent at BPK Enterprise for duration of 5 months starting from 4 Nov 2013 and ended 24 Mac 2014. It is submitted as one of the prerequisite requirements of DBN 307 and accepted as a partial fulfillment of the requirements for obtaining the Diploma in Building.

Name : Nor Hidayah Bt Satiman

UiTM ID No : 2011188131

Date :

LIST OF FIGURES

Figures 3.1	Jururawat College	14
Figures 3.2	Dewan Kembara Mahkota	14
Figures 3.3	Map go to site construction	15

LIST OF TABLES

Table 2.3	Company organization chart	8
Table 2.4	List of completed project	9
Table 2.5	List of progress project	11
Table 2.6	List of project sub-contract	12
Table 3.1	Machineries and equipment to do refurbishment work	16
Table 3.2	Method construction to do refurbishment work	19
Table 3.3	The potential hazards during construction site	22

LIST OF ABBREVIATIONS

CIDB Construction Industry Development Board

PKK Pusat Khidmat Kontraktor

JKR Jabatan Kerja Raya

MPOB Malaysian Palm Oil Board

MDS Majlis Daerah Segamat

AKNOWLEDGEMENTS

Alhamdulillah, all praises to Allah for the strengths and His blessing completing this report. First and foremost, sincere thanks to my lecture supervisor Encik Mohamed Rizal Bin Mohamed for his guidance, advice and moral support during completing this report. Not forget, great appreciation go to rest Practical Training Coordinator Sr. Anas Zafiro bin Abdullah Halim and Faculty's Coordinator Dr. Mohd Rofdzi Bin Abdullah. Secondly, I would like to acknowledgement my thanks to Encik Zakaria bin Abd.Aziz, Manager of BPK ENTERPRISE for his kindness and trust giving me the chance to have my industrial training in his company. At the same time he also taken a lot of effort to go through my daily report. Beside, I would like to express my deeply thanks to Nurfamiza Binti Misnan, site supervisor for his cooperation and endless patience in letting me during fieldwork and answering all my doubtful concern around fieldwork. Never forget too, I would like too, give my heartily and thousand thank to all staff of BPK ENTERPRISE especially to Puan Nor Afizah Bte. Mohd Salleh, Encik Jailani Bin Ahmad and Encik Seheimi Bin Mess who answer my each question when I am ask for a problem or detailing on construction event even they busy with their work.Finally, I would like to express my heartfelt gratitude to my family, friends and also lecturer for their support, constructive suggestion and also criticism.

ABSTRACT

The refurbishment work has the potential to keep growing and contribute to the growth of total Malaysian construction output. The increased number of obsolete and deteriorating buildings, coupled with the limited land for new development will contribute to increased demand for refurbishment works in Malaysia. This report explain about the process and procedure that involves in the refurbishment and renovation of hostels. This report are divided to several parts and its begin with background company and background the construction project. While the process it carried out, there are several problems such as whether conditions that it not good and makes this works obstructed. Furthermore, this report it also to identify several machines and equipment that used when to do this project and also to identify the potential hazards that have in the construction site while the project is carried out. In conclusion, this report it also explain in detail about the refurbishment and renovation works as practically.

TABLE OF CONTENT

CONTENT	PAGE	
Acknowledgements	i	
Abstract	ii	
Table of Content	iii	
List of Tables	iv	
List of Figures	v	
List of Appendices	vi	
List of Abbreviations	vii	
CHAPTER 1.0	PREFACE	
1.1	Introduction	1
1.2	Objective	2
1.3	Scope of Study	3
1.4	Method of study	4
CHAPTER 2.0	COMPANY BACKGROUND	
2.1	Introduction	
2.2	Company Profile	5
2.3	Organization Chart	8
2.4	List of Project	
2.4.1	Completed projects	9
2.4.2	Project in progress	12
CHAPTER 3.0	CASE STUDY	
3.1	Introduction	15
3.2	Project Background	16
3.3	Case Study	17
CHAPTER 4.0	CONCLUSION	26
4.1	RECOMMENDATION	27
REFERENCES		28

CHAPTER 1

INTRODUCTION

1.1 INTRODUCTION

Refurbishment is an important sector in the Malaysian construction industry, and has been growing rapidly over the last five years. In 1992, it grew by only 2 percent, but this increased to 16 percent in 2006 (CIDB, 2007). Despite its increasing importance, only a few pieces of research have been conducted on refurbishment projects and the factors that contribute to their performance. Factors that initiate refurbishment activity are mainly building deterioration and obsolescence (Aikivuori, 1996).

Therefore, management in the design process needs to be improved in order to produce an accurate design before starting work on site. However, the design process is not an easy process to manage. Refurbishment in this study refers to upgrade, major, repair work, renovations, alteration, conversions, extensions and modernization of existing building, but excludes routine maintenance and cleaning work (Ali and Rahmat, 2009). However, refurbishment differs from new – build projects because design in refurbishment projects needs to be matched up to existing building conditions so that it is compatible. Problems arising in the existing building are due to the lack of clarity whereby most of the information is unavailable or difficult to obtain. As a result, many modifications of design needs to be made by the contractor during the construction stage due to inaccurate information given. Frequently, requests for design changes are made at a very late stage of the design process (Gilleard and Lee, 1998).

1.2 OBJECTIVE OF REPORT

There are several objective of this report. There are :

1. To identify the machineries and equipment used for refurbishment works for surau.
2. To describe the method of construction of refurbishment works for surau.
3. To identify the potential hazards during refurbishment works.

1.3 SCOPE OF REPORT

The scope of this report covers the refurbishment work from beginning to end in the Siti Aminah Hostels to be surau. The name of this project is for refurbishment work Siti Aminah Hostels to be surau and this is a project for the sub- contract carried out by Bpk Enterprise. This is a project done in College Jururawat Masyarakat Segamat. The amount for this project is RM 20,000.00.in addition, the duration for this project started on 24 Dec 2013 and to be completed on 20 Jan 2014. It takes almost two months to completed this project.

1.4 RESEARCH METHODOLOGY

In carrying out the research, right methodology is required to enable the compilation of data and information from various sources. The methods used to undertake the research is stated as below :

i. Observation

Based on the observation at the site this works requires precision and skill of the workers to use the equipment or machineries to do the work. In addition, the workers not concerned about security because at the project site are littered with nails and some employees not wearing safety boot. The workers also did not wear a safety helmet while doing this work and it may be will lead to the occurrence of any accidents.

ii. Interview

Based on interview with the company supervisor site NurFamiza binti Misnan that was almost two years working on the Bpk Enterprise company, the refurbishment works done it not and easy undertaking. This is because all parties should be involved including developers, contractors, and employees. As a supervisor site, Famiza must know in detail the work done from beginning to the end of the works. Without the skills from workers, it may be not be done properly.

iii. Internet

Based on internet, the refurbishment works is explain in detail. The refurbishment of building can be complex whatever the age or condition. Many buildings have been speculatively built and few, if any records of their construction exist. Therefore, great care is needed in planning the work, as there are often hidden dangers to be investigated at early stage.

2.2.1 COMPANY MISSION AND VISION

1. Help the community by providing quality and efficient services in construction activities related to the environment.
2. Progress continued to development and growth with the expertise to meet industry and society.
3. Finding new technologies and provide training to employees in construction and development.
4. Emerging as a key part of community.

2.2.2 INFORMATION ABOUT COMPANY MANAGER

Name :Zakaria Bin Abdul Aziz

I/c no :

Address : No. 73 Jalan Putra 2/23, Bandar Putra, 85000 Segamat, Johor.

Marital status : married

Academic qualifications : SPM

Working experiences : 25 years

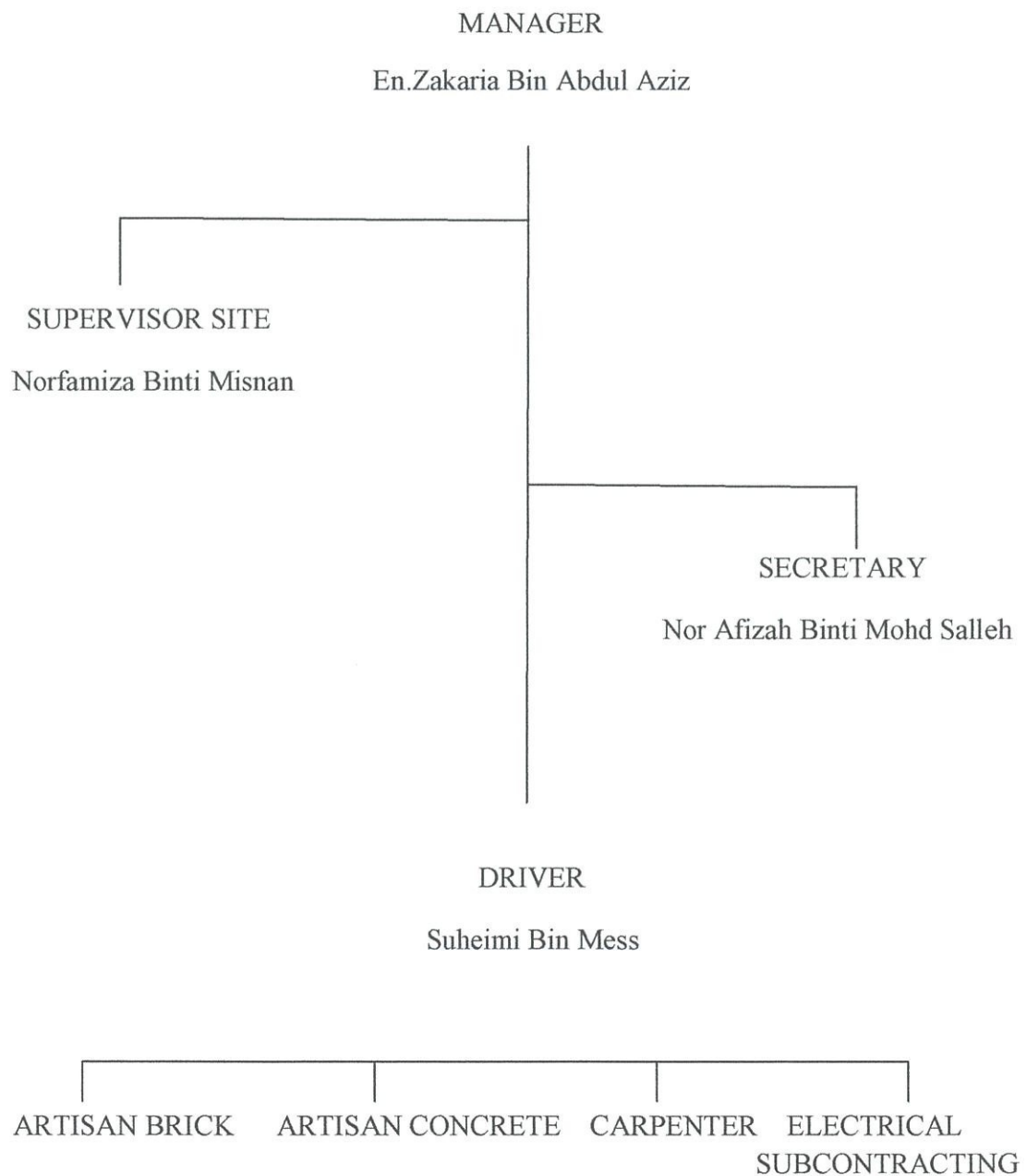
Race :malay

Religion :islam

2.2.3 INFORMATION ABOUT PERSON IN MANAGEMENT



- | | |
|-------------------------|---|
| 1. MANAGER | : Zakaria Bin Abdul Aziz |
| I / c no | : |
| Academic qualifications | : SPM |
| Working experiences | : 25 years |
| Marital status | : married |
| | |
| 2. SUPERVISOR SITE | : Norfamiza Bt Misnan |
| I / c no | : |
| Academic qualifications | : diploma kejuruteraan awam |
| Working experiences | : 2 years |
| Marital status | : single |
| | |
| 3. SECRETARY | : Nor Afizah Binti Mohd Salleh |
| I / c no | : |
| Academic qualifications | : SPM |
| Working experiences | : 12 years |
| Marital status | : married |
| | |
| 4. DRIVER | : Suheimi Bin Mess |
| I / c no | : |
| Academic qualifications | : SPM |
| Working experiences | : 12 years |
| Marital status | : married |
| | |
| 5. WORKER LEADER | : Haryanto |
| No. passport | : AR 297200 |
| | |
| 6. SKILLED WORKMAN | : 7 person Indonesian foreign workers in permit |




2.3 COMPANY ORGANIZATION CHART



2.4 LIST OF PROJECT

2.4.1 LIST OF COMPLETE PROJECT

NO	PROJECT	CONTRACT AMOUNT(RM)	CLIENT	FIGURES
1	Menaik taraf Terminal Pengangkutan Awam Bandar Segamat, Segamat Johor. No kontrak : MDS / P – 01 / 2012 (T)	766,950.00	Majlis Daerah Segamat	
2	Cadangan mendirikan rumah kediaman 1 tingkat jenis kekal di atas lot PTD 2428, Bukit Siput, Mukim Pogoh, Daerah Segamat.	200,059.00		

3	Kerja – kerja memperbaiki kerosakan bangunan dan lain – lain kerja yang berkaitan di Sek. Men. Buloh Kasap, Segamat, Johor.	1,900,000.00	JKR Johor Bahru	
4	Cadangan membina masjid (300 jemaah) di Kampung Mengsudut Lama, Mukim Gemas, Segamat, Johor.	901,000.00	JKR Johor Bahru	
5	Cadangan pembinaan bangunan makmal dan pejabat EPC di Stesen Penyelidikan MPOB Keratong, Pahang.	1,630,000.00	MPOB	


6	Membina dan menyiapkan empat (4) blok (8 unit) kuarters kelas “F” berkembar dan lain-lain kerja yang berkaitan di sekolah kebangsaan LKTP Pemanis 1, Segamat, Johor Darul Takzim. No. kontrak : JKR/PERS/J/SG 17/2007	1,847,700.00	JKR Johor Bahru	
---	--	--------------	-----------------------	---




Table 2.4.1 it shows the list of completed project.

2.5 LIST OF PROJECT IN PROGRESS FOR BPK ENTERPRISE

NO	PROJECT	CONTRACT AMOUNT (RM)	CLIENT	FIGURES
1	Menyediakan jentera, peralatan, dan mencuci kelengkapan dan peralatan taman permainan kanak-kanak di Taman Bukit Hampar Segamat Johor.	1,800.00	MDS	
2	Membekal papan tanda nama 'Selamat Datang ke Segamat' di bulatan stesen keretapi dan Terminal Pengangkutan Awam.	9,500.00	MDS	
3	Membekal papan tanda nama 'Selamat Datang ke Segamat' di persimpangan jalan Segamat Kuantan.	9,500.00	MDS	

Table 2.5 it shows list of progress project for BPK ENTERPRISE.

2.5.1 LIST OF PROJECTS IN PROGRESS FOR SUB-CONTRACT OF BPK ENTERPRISE

NO	PROJECT	CONTRACT AMOUNT (RM)	CLIENT	FIGURES
1	Membina pejalan kaki di Jalan Pawang, Bandar Segamat. No. inden : I 000019 Syarikat : Ham Bina Construction	197,000.00	MDS	
2	Kerjabaikpulihan ubahsuai Asrama Siti Aminah untuk dijadikan surau pelatih dan kekemasan bilik air. No. inden : P13000024 Syarikat : Ham Bina Construction	20,000.00	Kolej Jururawat Masyarakat Segamat	
3	Membaiki dan menurapsemula jalan di Jalan Melur 1,2,3 Taman Sri Kenangan, Batu Anam Segamat. No. inden : I 000110 Syarikat : Bt Construction & Trading	87,350.00	MDS	



4	Membaiki jalan di gerai buah, Taman Yayasan Segamat. No. inden : I 000110 Syarikat : MYS Tegap Enterprise	20,000.00	MDS	
5	Kerja menaiktaraf pendawaian elektrik dari fasa 1 kepada fasa 3 dan lain kerja berkaitan di Pejabat Penerangan Segamat No. inden : L0281314010130871 Syarikat : SRD Enterprise	20,000.00	Pejabat Penerangan Segamat	

Table 2.6 shows the list of progress project for sub-contract company.

CHAPTER 3

CASE STUDY

3.0 REFURBISHMENT WORK

3.1 INTRODUCTION

Refurbishment of buildings is becoming increasingly common to enable the provision of modern facilities within old buildings. There are many reasons for refurbishing a building. This work might be described as restructuring and represents the most extensive form of repair or reconstruction activity associated with existing buildings. Although it is generally more expensive than total demolition and new construction, it may be economically viable due to local planning or tax incentives. Obviously the economics of the more costly solution of restructuring needs to be considered against the option of starting again from scratch but achieving a smaller lettable area.



Figures 3.1 front side Jururawat College.

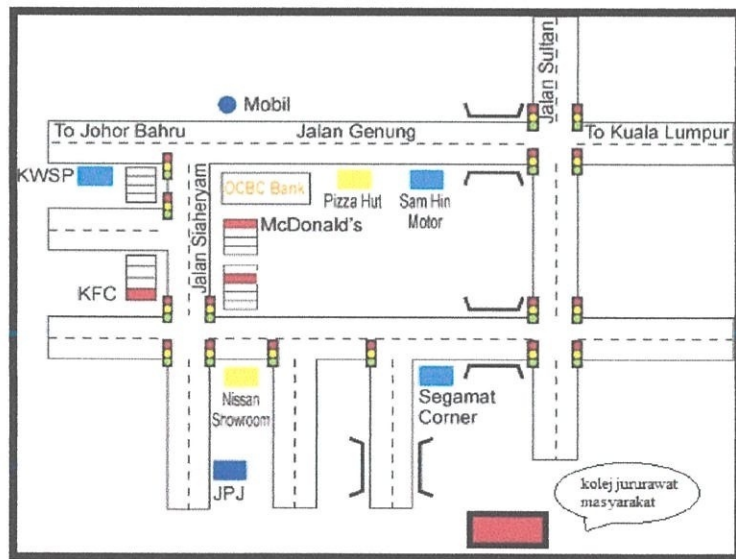


Figures 3.2 Dewan Kembara Mahkota is near to the surau.

3.2 PROJECT BACKGROUND


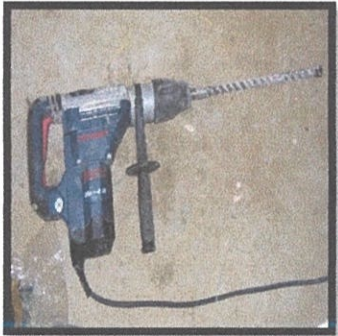

The name of this project is for refurbishment work Siti Aminah Hostels and this is a project for the sub – contract carried out by BPK ENTERPRISE. The amount of this project is RM 20,000.00 and this is developer of Jururawat College. In addition, the duration for this project started on 24 DEC 2013 and be completed on 20 JAN 2014. It takes almost two months to completed this project.


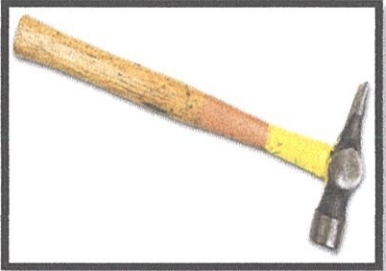

This is direction from office to site construction is from SegamatBaru to arrived the project site it must to pass first traffic light is near with Caltex oil station. Further, second traffic light is also connection to go to Jawa Village is near to shopping complex Giant. The journey is continued to meet the third traffic light with connection to go to down Town with near at OCBC Bank. After that, for arrived to the site project it must pass a front Bowling Center and restaurant that's near at Sri Genuang, bridge Segamat Town and railway train. Lastly it must to meet fourth traffic light with connection to main Town in Segamat and must turn left from Segamat Baru (office), with front the food court. This is a map to go to site project from Segamat Baru.



Figures 3.2 maps go to Jururawat College.

3.3 THE MACHINERIES AND EQUIPMENT USED FOR REFURBISHMENT FOR SURAU.

NO	OPERATION	MACHINERIES & EQUIPMENT	FIGURES
1	Demolishing bathroom.	excavator	
2	<p>Removing brick wall.</p> <p>Removing sink.</p>	<p>i. Wall breaker</p> <p>ii. Drill</p> <p>iii. Wall breaker</p> <p>iv. Wheel barrow</p>	 

3	Demolishing space in the building.	<ul style="list-style-type: none"> i. Ledge hammer ii. hammer 	 
4	Removing the piece cut brick wall into the lorry.	<ul style="list-style-type: none"> i. Lorry ii. excavator 	


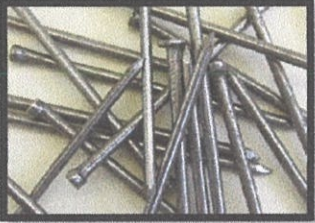







5	Removing brick wall in the upper space in the buildings.	<ul style="list-style-type: none"> i. Ladder or staircase ii. Nail iii. Hammer 	 
6	Cleaning works -Shovel the material after refurbishment works	Shovel	

Table 3.3 Shows the machineries or equipment to do the refurbishment works.

3.3.1 THE METHOD OF CONSTRUCTION OF REFURBISHMENT WORK FOR SURAU.

NO	OPERATION	DIAGRAM	PLANT/ EQUIPMENT
1	Identify the space or room for refurbishment works.	<ul style="list-style-type: none"> i. Measuring tape ii. ladder 	 
2	Demolishing work outside and inside the building.	Excavator is used to demolishing brick wall in the building.	

		<ul style="list-style-type: none"> i. hammer ii. wall breaker 	
3	Demolishing works in the kitchen.	<ul style="list-style-type: none"> i. wheel barrow ii. hammer iii. drill 	
4	Repairing the ceiling in the buildings.	New ceiling to replace old ceiling.	






5	Build the new brick walls inside the buildings.	<ul style="list-style-type: none"> i. Shovel ii. Bucket iii. Wheel barrow 	
6	Do the finishes such as painting the outside and inside the buildings.	<ul style="list-style-type: none"> i. Brush ii. White paint iii. Color paint 	 




Table 3.3.1 it shows the method construction to do refurbishment works for surau.

3.3.2 THE POTENTIAL HAZARDS DURING REFURBISHMENT WORKS.

In the construction site, potential hazards is high because many workers not be careful during refurbishment works. The workers not wear any safety equipment at the construction site. For example, the workers not wear safety boots, not wearing gloves, and not wear safety helmet. This equipment is very important because to avoid workers from any dangerous. Furthermore, hazards also about the machines or equipment not put at the save area. For example nail and wire at the construction si

Hazard at construction site :

NO	HAZARDS	SOLUTION	DIAGRAM
1	Left over nail in the construction site.	The nail should be place in the box so that it can easy for workers to use the nail.	
2	Dust in the construction site.	The workers should wear the mask to avoid any sick.	

3	Wire were scattered in the floor during the construction site.	The wire should or must arrange and put at the safety place.	
4	<p>Safety equipment</p> <ul style="list-style-type: none"> - Not wearing any gloves 	To wearing gloves is so important during use equipment or machines to avoid any injuries.	
5	<p>Safety equipment</p> <ul style="list-style-type: none"> - Not wearing safety helmet during construction. 	The workers must wear suitable safety helmet to avoid any injuries.	



6	<p>Safety equipment</p> <ul style="list-style-type: none"> - Not wearing safety boots 	<p>The workers should wear suitable safety boots in the site construction when during the works.</p>	
7	<p>Safety equipment</p> <ul style="list-style-type: none"> - Should used suitable ladder during the construction. 	<p>The workers must ensure the equipment are safe to used to avoid any injuries.</p>	

Table 3.3.2 Shows the potential hazards during the refurbishment works.

CHAPTER 4

CONCLUSION

As conclusion, the refurbishment works is very difficult and needs in detail to do this works. All parties should be involved including developers, contractors and employees to do this works and not make any mistakes while doing this works. Based on the report or research, it can be defined and understanding of the machineries and equipment functions for refurbishment works. For examples, excavator is used to demolishing area for refurbishment works. Furthermore, the method of construction used for refurbishment works is not easy and need to know and understanding about this method. In addition, the potential hazards can increase during refurbishment works because the workers not used any suitable safety equipment at the construction site.

RECOMMENDATION

The recommendation to improve and resolve refurbishment projects are stated as below :

- Provide a study on application of information technology in planning and control of refurbishment projects. The main objective would be to establish the potential of information technology which help increase the integration in the planning and control process of refurbishment projects who are located on different sites, at different times and employed in different organizations.
- There should be a continuity of relationship between planners and the public, between professionals and others and between people to emphasize the important of community groups for public awareness.

REFERENCES

- CIDB, (2007) *Construction Industry Development Board*. Retrieved www.cidb.com.my
- Aikivuori, A. (1996). *Period and demand for private sector refurbishment, construction management and economics*. 14, UK. 3-12. Retrieved www.refurbishmentconstruction.com.my
- June, N (2010) *Refurbishment, rehabilitations and renovation*, CIB W65, Managing Construction World-wide, 7-10 September, London Vol 3, 67-81. Retrieved www.refurbishment.com.my
- Stermen , (1992). *Management education and training for construction work within the construction industry*. Ph. D thesis. Vols 1 and 11, Department of Civil Engineering and construction , University of Salford, England. Retrieved www.managementeducationandtrainingforconstruction.com.my
- Gilleard , F. & Lee, W (1998) *CBRefurb : A Case – Based Building Refurbishment Cost Estimator and Decision Support System* . retrieved www.buildingrefurbishment.com.my
- Ali , and Rahmat (2009) *Refurbishment Cycles and the management of Refurbishment Projects*. Retrieved www.refurbishmentcycles.com.my
- Academic Journal, *International Journal of the Physical Science*. Retrieved www.academicjournal.com.my

LIST OF APPENDICES





