UNIVERSITI TEKNOLOGI MARA

DEPARTMENT OF BUILD OF ENVIRONMENT STUDIES AND TECHNOLOGY, UNIVERSITI TEKNOLOGI MARA PERAK CAWANGAN SERI ISKANDAR

HOUSE RENOVATION

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10th JANUARY 2022

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Entitled

HOUSE RENOVATION

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

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STUDENT'S 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 Lembaga Kemajuan Terengganu Tengah (KETENGAH) for duration of 19 weeks starting from 5th September 2021 and ended on 7th January 2022. It is submitted as one of the prerequisite requirements of BGN310 and accepted as a partial fulfillment of the requirements for obtaining the Diploma in Building.

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ABSTRACT

The term 'renovation' describes the process of restoring something to its original condition. Renovation is the process of improving or modernising an old, damaged, or malfunctioning structure in the construction business. This differs from 'retrofitting,' which involves adding a component or feature that was not initially included, or 'refurbishment,' which is a cleaning, decorating, or re-equipment procedure.This renovation process is conducted under LEMBAGA KEMAJUAN TERENGGANU KETENGAH (KETENGAH). Hence, the aim for the report is to show the process of renovating the house. The report will explain the what part that need to be renovate. Also, identify the issues and challenges in the process of renovation. Therefore, students can know how the renovation process begin until finish. In conclusion, this can help student to know deeper about what kind of renovation needed for certain house.

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CHAPTER 1.0

INTRODUCTION

1.1 Background of Study

The process of renovating (also known as remodelling) a broken, damaged, or outmoded structure. Commercial and residential renovations are the most common types of renovations. A lot of people modify their homes to give them a fresh look or imrpove their lifestyle. [4] Home renovations are a reliable source of income for builders. [5] Homeowners frequently modify their properties in order to boost their resale value and profit when they sell or to make their house become more comfortable. Homeowners may also desire to make their home more energy efficient, green, or sustainable, which may need a renovation effort. Alternatively, for aesthetic or comfort reasons, a homeowner's own preferences and demands may change over time, necessitating a makeover.

1.2 Objectives

1. To explain the types of wall used

2. To explain the types of floor used

3. To identify issues and challenges in renovating the house

1.3 Scope of Study

The scope of study only focused on the process of renovating the house, on what kind of materials used for the wall and floor according to the Latest Construction Drawing and Materials Specifications. All the materials mentioned need to be make sure that it is within the given contract value.

1.4 Method of Study

a. There are several methods of study that are being conducted in the process of renovating the house. The approaches are grouped into several categories, including observation, interview, journal, and review.

a. Observation method

The observation approach is used to observe and aid the supervisor communicate with the contractor. These observations were also recorded using the students' iPhones as proof during the observation process.

b. Interview method

In the office, the interview methods were undertaken by interviewing the personnel and the department head. A related inquiry on the renovation procedure should be asked by the student.

c. Journal method

The student will use the journal technique to record all of the information gathered during the interview method or any other chance meeting. The critical notes will be jobbed down and remembered by one keep using this diary approach.

CHAPTER 2.0

COMPANY BACKGROUND

2.1 Introduction

Figure 2.1.1 above shows the main building of Lembaga Kemajuan Terengganu Tengah (KETENGAH).

Source: Photo taken in Lembaga Kemajuan Terengganu Tengah (KETENGAH).

Lembaga Kemajuan Terengganu Tengah (KETENGAH) is an agency under the Ministry of Rural Development which was incorporated on 12 April 1973 through the Parliamentary Act No. 104/73 with the authority to carry out economic and social development in an area of 443,876 hectares covering the interior of Dungun, Kemaman and Hulu Terengganu Districts.

On 12 June 1993, the Kenyir Lake Development Area, Hulu Terengganu with an area of 209,199 hectares was gazetted through P.U. (B) 356 and area gazette plan No. PW486 as part of the KETENGAH area makes the entire KETENGAH region 653,075 hectares or about one-half of the area of Terengganu.

2.2 Company Profile

2.2.1 Company Information

Figure 2.2.1 above shows the logo of Lembaga Kemajuan Terengganu Tengah (KETENGAH).

Source: Photo taken from website Lembaga Kemajuan Terengganu Tengah (KETENGAH).

Name of the company	Lembaga Kemajuan Terengganu Tengah (KETENGAH)
Address	Karung Berkunci No 3, 23409, Bandar Al-Muktafi Billah Shah, Dungun, Terengganu
Telephone no.	09-823 1000
Fax no.	09-8223 105
Type of Business	Regional Development
Status of company	Government
Owner / board of directors	Y.M. Tengku Ahmad Nadzri bin Tengku Musa
Vision	To make KETENGAH progress with a progressive and productive society by 2025

2.3 Organization Chart

Below shows the organization chart of the company starting with the executive chairman to the main head for each departments such as operational, building and corporate.

Figure 2.3.1 above shows the organization chart of the company.

Source : Lembaga Kemajuan Terengganu Tengah (KETENGAH) company profile.

2.4 List of Projects

2.4.1 Completed Projects

List of table 2.4.1.1 below are the lists of completed projects by the company.

No	Projects	Completed	Company	Contract Value (RM)
1	Kerja-kerja Membaikpulih Pusat Komuniti Desa Serta Kerja Berkaitan Di Bandar Al-Muktaffi Billah Shah, Dungun, Terengganu.	July 2021	Indah Jaya Niaga	125,230.00
2	Projek Penyediaan Tapak dan Infrastruktur Kawasan Pembangunan Bercampur Di Atas Lot 2314 Taman Selesa, Bandar Al-Muktaffi Billah Shah, Dungun, Terengganu.	December 2021	Nadi Construction Sdn Bhd	3,114,521.20
3	Kerja-Kerja Penyelenggaraan dan Menaiktaraf Premis Perniagaan IKS002 Dan KB005 Serta Kerja-Kerja Berkaitan di Usahawan KETENGAH Bandar Al-Muktaffi Billah Shah, Dungun, Terengganu.	December 2021	Rohani bin Taib	212,570.00
4	Kerja-Kerja Menaiktaraf dan Melengkapkan Dua(2) Unit Premis Perniagaan Dalam Wilayah KETENGAH Bagi Tujuan Pensijilan	December 2021	Wan Mohd Trading	159,169.45

5	Kerja-Kerja Baik Pulih 3 Unit Rumah Serta Kerja-Kerja Berkaitan di Kampung Durian Kassim dan Pela, Hulu, Terengganu, Terengganu	August 2021	NRS Unggul Resources	52,000.00
6	Kerja-Kerja Baik Pulih 4 Unit Rumah Serta Kerja-Kerja Berkaitan di Kampung Durian Tok Dor dan Landas, Hulu Terengganu, Terengganu	August 2021	Zulraisha Construction	52,000.00
7	Kerja-Kerja Baik Pulih 3 Unit Rumah Serta Kerja-Kerja Berkaitan di No.374,257,277 Bukit Besi, Dungun, Terengganu	August 2021	Jati Unggul Enterprise	52,000.00
8	Kerja-Kerja Baik Pulih 3 Unit Rumah Serta Kerja-Kerja Berkaitan di No.483, 199, 401 Bukit Besi, Dungun, Terengganu	August 2021	WY Construction Enterprise	39,000.00
9	Kerja-Kerja Baik Pulih 3 Unit Rumah Serta Kerja-Kerja Berkaitan di No. 129, 145, 131 Bukit Besi, Dungun, Terengganu	August 2021	Ramuda Recources	39,000.00
10	Kerja-Kerja Baik Pulih 3 Unit Rumah Dan Kerja-Kerja Berkaitan di No.171, PT3423, Padang Lalang, Bukit Besi, Dungun, Terengganu	August 2021	MHK Permata Resources	39,000.00

2.4.2 On-going Projects

List of table 2.4.2.1 below are the lists of on-going projects by the company.

No	Projects	Completed	Company	Contract Value (RM)
1	Kerja-Kerja Baik Pulih 2 Unit Rumah Dan Kerja-Kerja Berkaitan Kampung Jongok Batu, Dungun, Terengganu	On-Going Project	T A W Enterprise	100,000.00
2	Kerja-Kerja Pengubahsuaian dan Naik Taraf Ruang Galeri Perkampungan Usahawan di Bangunan Kilang Bimbingan KB003 Bandar Al-Muktafi Billah Shah, Dungun, Terengganu	On-Going Project	FJ Jaya Enterprise	163,362.00
3	Kerja-Kerja Membaikpulih Tapak Perkhemahan Lawit, Menaiktaraf Wakaf Rehat dan Kerja-Kerja Berkaitan di Pengkalan Utama, Tasik Kenyir, Hulu Terengganu, Terengganu	On-Going Project	Natasha Abas Enterprise	95,000.00
4	Menyiapkan Kerja-Kerja Terbengkalai Bagi Pembangunan Bercampur Bandar Baru Gawi, Tasik Kenyir, Hulu Terengganu, Terengganu	On-Going Project	Hormat Prima Sdn Bhd	2,390,000.00

CHAPTER 3.0

HOUSE RENOVATION

3.1 Introduction to Case Study

The case study of this report shall be focus based on one of the client house, Puan Mariah binti Azhar which is located at B-20 Taman Setia, Bandar Al-Muktaffi Billah Shah, 23400 Dungun, Terengganu. The construction need to be finish in 4 weeks based on the deadline. Starting from in the middle of November and finished in the end of December. The project value is RM13,000.

The construction project is about a few renovation that need to be done for the house which is plastering the wall since the wall is not fully plastered and and then changing the old roof to new roof because of leaking. This renovation is fully done by the contractor of the project.

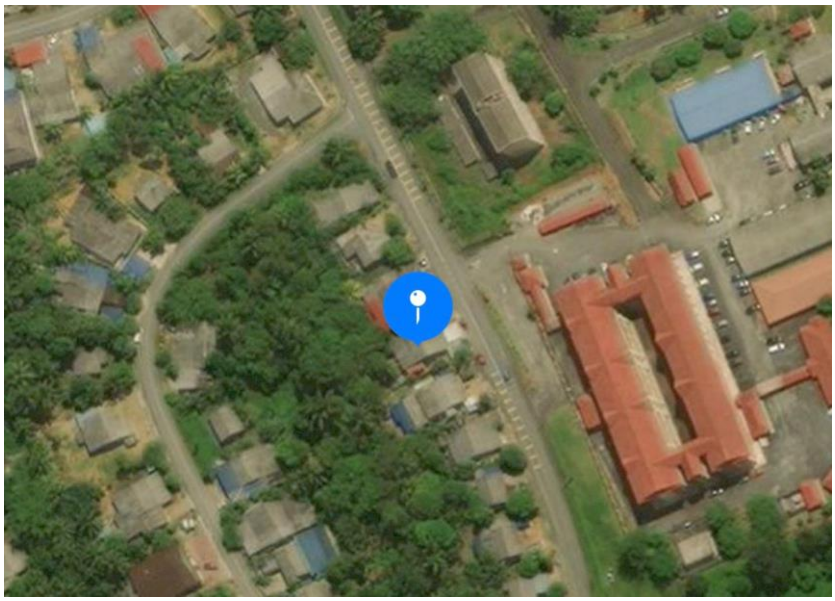

Figure 3.1.1 above shows the location of the house

Source : Google satellite

3.2 Wall

3.2.1 Types of the plaster used

Lime plaster is the plaster that was used in this case study. Lime plaster is a form of sand, water, and lime, usually non-hydraulic hydrated lime (also known as slaked lime, high calcium lime or air lime). Lime plaster has its own set of benefits and drawbacks. The advantages of lime plaster are that it is more workable and makes plastering operations easier. Furthermore, lime plaster is long-lasting and provides excellent thermal insulation, both of which contribute to the owner's comfort. Furthermore, lime plaster protects the wall by acting as a natural bacteria repellent.

The downsides of lime plaster include that it hardens slowly, making plastering more difficult. Aside from that, the wall will not be dry during the unexpected setting period, which will make the laborer's job more difficult. Furthermore, the hydrogen potential, or pH level, will decrease. The pH level is really high.

Figure 3.2.1 above shows plastering the wall

3.2.3 The method of wall plastering

For the internal wall, the area where the plastering will take place will be cleaned. The off lines to brick walls set out on floors will be used to install level pegs on walls. (Using a nylon thread and a plumb bob in the centre.) Before applying mortar to the brick walls, they will be moistened. On areas where the required mortar thickness exceeds 25mm, a first coat mortar filling (1:4 Cement and Sand) up to 15 mm will be applied. To obtain a semi-rough finished surface, the walls and columns will be plastered using a 1:4 cement and sand mixture.

The vertical junction of structural columns / walls & brick walls will be handled by securing 200mm wide mesh to the vertical wall joint using wire nails / concrete nails and aligning the mesh. Joints between walls and beams will be made up to a maximum of 20mm and sealed with a flexible filler that is fire rated for 30 minutes. (Material descriptions will be submitted to the Engineer for approval). Internal plastering will be applied to concrete columns, beams, and walls that are aligned with brick walls, and other concrete surfaces will be coated with cement base simple plaster. (Material descriptions will be submitted for the Engineer's approval.)

Figure 3.2.2 above shows before and after plastering.

3.3.1 Types of floor used

The floor used is concrete floors. Concrete floors have various advantages, including strength, stiffness, span, fire resistance, acoustics, maintenance, and lifespan. A concrete floor consists of a flat slab of concrete that is either poured in place or precast in a factory. Reinforcing steel, often known as rebar, is a steel bar or mesh of steel wires used to reinforce concrete. Rebar is used to compensate for the fact that, while concrete is strong in compression, it is weak in tension. Rebar can carry tensile loads and hence improve overall strength by being placed into concrete.

Figure 3.3.2 above shows the concrete floor.

3.4 Problems and Solutions

Cracked and discoloured plaster are two prevalent concerns in wall plastering. Hairline cracks, settlement cracks, and delamination cracks are three types of fractures that can occur in this case study wall plastering. A thin hairline crack is a small crack that might detract from a home's look. To avoid this, the labourer in this case study made sure that the amount of sand in the lime plaster mixture did not exceed 3 trowel scoops, and that he did not use very fine sand because it requires more water and can cause future cracking. If this type of crack resurfaces in the future, it can be repaired by filling holes or cracks with a lime-based putty and rubbing the filler with sandpaper to get a smooth surface.

Settlement cracks are most common when a house is being renovated. These cracks are characterised by groups of cracks that run in the same direction and should be watched since they are structural fractures that require professional assistance. Large variances in foundation settlement induced by variable soil and loading conditions are likely to generate this sort of crack. The delamination crack indicates that the plaster behind it is moving away from the wall or ceiling stud. There is a risk of the plasterboard falling if these fissures run parallel to both ceilings and walls. As quickly as feasible, these should be repaired or replaced.

Figure 3.4.1 above shows hairline crack.

Figure 3.4.2 above shows settlement crack.

Figure 3.4.3 above shows delamination crack.

CHAPTER 4.0

CONCLUSION

In conclusion, doing a renovation for a house is a very good things to do since it can help to improve the house appearance and can improve the quality of the house. But it need to be take care seriously since it is not that easy since there are many factors that need to be see through. From what types of material that suitable to be used, is the price affordable and is it meet the client liking and expectation.Plastering the walls may appear to be a simple chore, but if done incorrectly, it may become extremely difficult. To produce the greatest quality concrete and plaster mixtures, the quantity and texture of the materials are critical. From the concrete mixture to the plastering job, skilled workers performed the work. The worker is employing a procedure that will save time on the building site by eliminating the need for concrete to dry before the plaster is placed, as well as the need for curing. Next, the concrete floor is proven to be very strong and also inexpensive so it is a good choice as a base.

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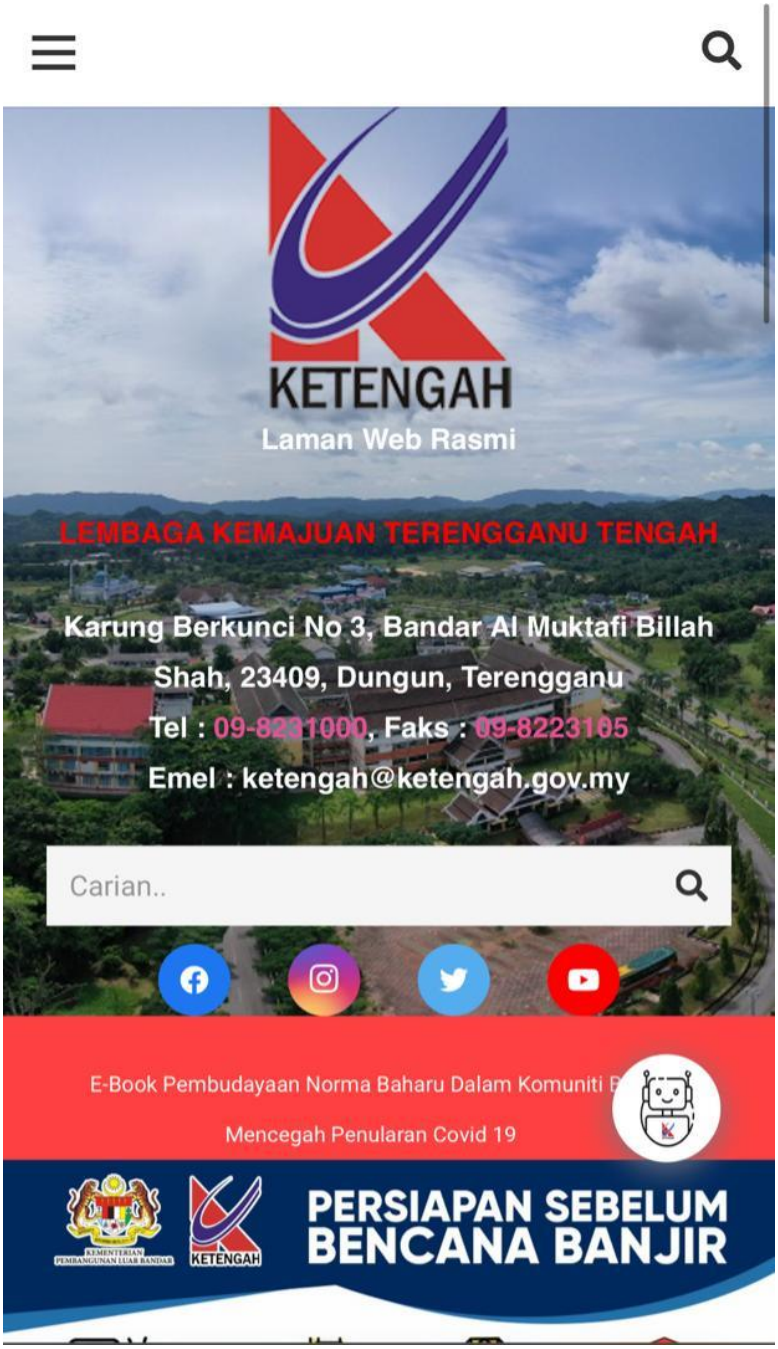
APPENDICES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