



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

INSTALLATION OF CERAMIC TILES

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It is recommended that the report of this practical training provided

By

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Entitled

Installation of ceramic tiles

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

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(10 JANUARY 2022)

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 Agro Bina Enterprise for duration of 20 weeks starting from 13 September 2022 and ended on 7 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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Thank you so much.

ABSTRACT

This report briefly describes the material and equipment used and the process of construction for installation ceramic tiles. According to few times site inspection experience at a construction site. The project took three months to finish completely on the construction side of the building. The objective of this report is to determine the material used for installation of ceramic tiles, to identify the equipment used in the project and to describe the process in installation of ceramic tiles. In this report, there are two types of study method which is observation and interview method. Observation method is performed by do a site visit. Meanwhile, interviews were conducted with site supervisor of this project. The finding from this report is the construction for the installation of ceramic tiles is setting out, excavation of the soil, installation of the reinforcement, concrete work and installing the ceramic tiles. During this construction, changes in weather, which are sometimes bright and sometimes wet, have caused the construction process to be slightly hampered. Unfortunately, this installation of ceramic tiles successfully completed on 15 November 2021.

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CHAPTER 1.0

INTRODUCTION

1.1 Background of Study

The building sector is important to a country's development and success. The construction of high-rise buildings, housing, and infrastructure in Malaysia demonstrates that it is a developing country in the world.

Tiles are thin plates or pieces used to cover surfaces such as roofs, floors, and walls in building construction. The many types of tiles and their uses are explored. In today's world, tiles are a key component in completing and beautifying both the inside and outside of a structure.

In the construction industry, ceramic tiles are a common building material. They're fashionable, long-lasting, and adaptable. They are an important aspect of any space's décor. Ceramic tiles are made from feldspar, zircon, bentonite, kaolin, and clay, among other minerals and clays. To make the ceramic tile body, raw ingredients go through a series of mechanical processes like mixing, drying, and forming.

There are many advantages of ceramic tiles. However, the goal of this research is to figure out how ceramic tiles are installed.

1.2 Objectives

- i. To determine the material used for installation of ceramic tiles.
- ii. To identify the equipment used in the project.
- iii. To describe the process in installation of ceramic tiles.

1.3 Scope of Study

The study is carried out at Surau Taman Perumahan Cheneras Jaya, Kuala Lipis. The scope of study is focused on the overhaul and maintenance of the old ceramic tiles. This title will be presented with several subtopics namely the material used, list of equipments and the process to install the ceramic tiles.

1.4 Methods of Study

a. Observation method

This method is run while performing a site visit. The site's condition was observed. The observations were written down in a notebook. Moreover, images of the site's progress were taken with a cell phone. This report includes the photographs taken as a consequence of the site visit. This type of study method is conducted for several times on different days until the project is completed.

b. Interview method

Interviews are also conducted to perfect the research method. Interviewing may be done in a variety of ways, however for this project, unstructured interviews were used. For this research, interviews with site supervisors were undertaken. He is the one who will inform you of the project's specifics, progress, and difficulties that occurred throughout the process of the project.

CHAPTER 2.0

COMPANY BACKGROUND

2.1 Introduction of Company

Agro Bina Enterprise was established on the 5th. September 1994 and began operations in 1999. Beginning in the 90s era, Agro Bina Enterprise has anchored its wings in the business world in the field of construction especially in the field of civil engineering.

It is a sole proprietorship company founded by En. Baderu Khisam Bin Shamsuddin as manager. On 25 September 2019 there was a change where Agro Bina Enterprise has become a partnership company as the nominee in the Companies Commission of Malaysia, CIDB and the Contractor Services Association has increased . Nurul Izzah Bin Baderu Khisam has become the second nominee in this company but still becomes contractors for class 'F' and known as G1 grade contractors. In line with that, Agro Bina Enterprise has registered with the Contractor Service Center and CIDB Malaysia to further strengthen the company's position.

Agro Bina Enterprise started its site as a small company in Kuala Lipis District, Pahang Darul Makmur. Armed with the experience gained, the company began to handle various projects such as works related to road construction, earthworks, infrastructure and all activities related to construction.

The ability and capability of the company is proven to be able to attract various layers of other contractors to manage their subcontract work. This is also due to the presence of machinery owned by the company which can certainly further facilitate the construction work. The company is also able to complete the project according to the set period by meeting the specifications and according to the client's wishes. Since then, the company has been given a lot of trust to handle various projects.

2.2 Company Profile

2.2.1 Company Information

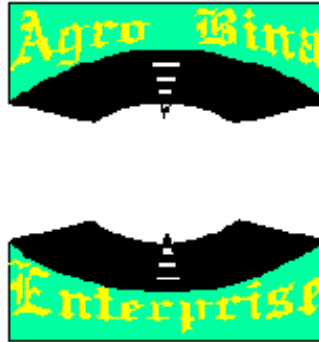


Figure 2.1: Logo of Agro Bina Enterprise

Registration No	:	000984827-D
PKK&CIDB Registration No	:	1970227-PH023757
GST Registration No	:	000329920512
Company Name	:	Agro Bina Enterprise
Company Address	:	No. 1 Taman Lipis Baru, Sg. Kerpan, 27200 Kuala Lipis, Pahang Darul Makmur.
No. Tel	:	09 – 3121991
No. Fax	:	09 – 3125008
Email	:	agrobina@yahoo.com
Owner No. Code PERKESO	:	F 7200001654 B
Bussiness	:	Construction

Registration with body-body

in Malaysia : Contractor Service Center (Class F)
CIDB Grade G1-B & CE

Bank : Bumiputera Commerce Bank Berhad &
Maybank Islamic Berhad

No. Account : 8005453974 (BCBB)

Owner : Baderu Khisam Bin Shamsuddin

2.3 Company Organization Chart

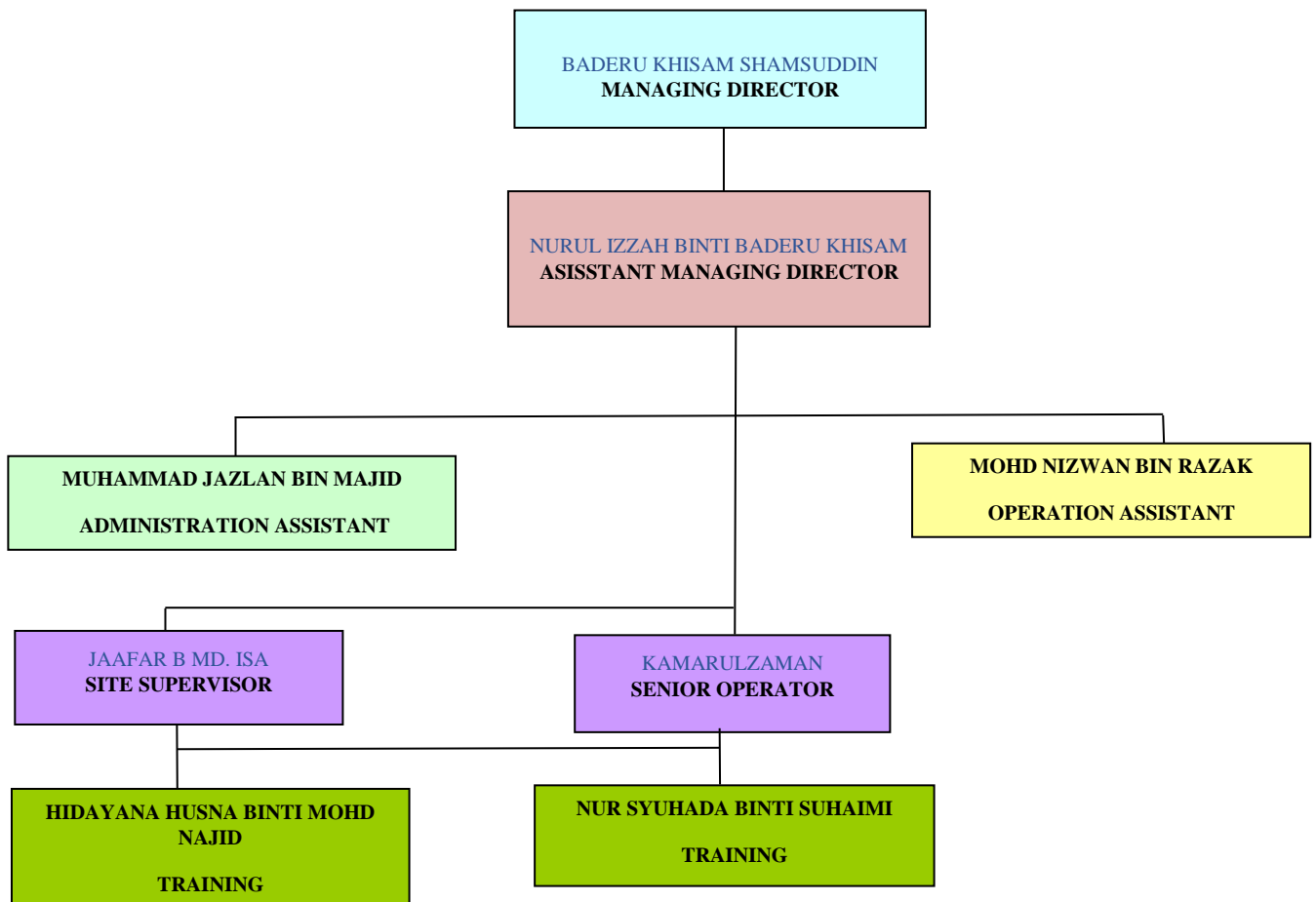


Figure 2.2 Company Organization Chart

2.4 List of Project

2.4.1 Completed Project

Table 2.1 Completed Project of Agro Bina Enterprise

No	Job Scope	Status
1.	Road maintenance (Premix) at Jalan Budu, Benta Estate, 27200 Kuala Lipis.	Completed
2.	Overhaul and maintenance Surau Taman Cheneras Jaya, 27200 Kuala Lipis.	Completed
3.	Road and maintenance (Premix) at Kampung Sama, Benta 27200 Kuala, Lipis.	Completed
4.	Road and maintenance (Premix) at Taman Desa Permai, Kuala Lipis.	Completed
5.	Road and Maintenance (Premix) at Balai Raya, Lubuk Kulit, Kuala Lipis.	Completed
6.	Road and Maintenance (Premix) at Jalan Kampung Lubuk Kulit, Kuala Lipis.	Completed

Source: Agro Bina Enterprise (2021)

2.4.2 Incompleted Project of Agro Bina Enterprise

Table 2.2 Incompleted projects of Agro Bina Enterprise

No	Job Scope	Status
1.	Installation of Culvert at Jalan Padang Tembak.	Incompleted (Ongoing)
2.	Renovation of toilet at Masjid Besar Kuala Lipis.	Incompleted (Ongoing)

Source: Agro Bina Enterprise (2021)

2.5 Equipment and plant

Table 2.3 Equipment and plant of Agro Bina Enterprise

Bil.	No.Pendaftaran	Model	Kuantiti
1.	AJE 3445	Road Paver (Vogelle)	1 unit
2.	AJD 6742	Road Roller (Dynapac)	1 unit
3.	AFB 4988	Road Paver	1 unit
4.	JEJ 2696	Road Tyre Roller (Vibromax)	1 unit
5.	BET 2040	Tractor (Ford)	1 unit
6.	AFC 3925	Backhoe Loader (Case)	1 unit
7.	WFT 7406	3 Tonne Lorry (Isuzu)	1 unit
8.	WKD 3993	3 Tonne Lorry (Mitsubishi)	1 unit
9.	WKC 4095	3 Tonne Lorry (Mitsubishi)	1 unit
10.	CCR 3993	Hilux Single Cap (Toyota)	1 unit
11.	TBH 3993	Nissan Navara	1 unit
12.	CAA 3716	Tropper (Isuzu)	1 unit
13.	WCV 1202	Van Panel (Toyota)	1 unit
14.	CAR 3993	Pick-Up Storm (Mitsubishi)	1 unit
15.	AED 4027	Road Paver (Sumitomo)	1 unit
16.		Hand Compactor	2 units
17.		Paver Broom	1 unit
18.		Portable Road Cutter	2 units
19.		Road Cutter	1 unit
20.		Grass Cutter	15 units
21.		Generator	1 unit

CHAPTER 3.0

CASE STUDY

INSTALLATION OF CERAMIC TILES

3.1 Introduction

This study describes the whole method to install the ceramic tiles. In this case study, the focused is on how the process installation of the ceramic tiles is construct. The location of this case study is located at Surau Taman Perumahan Cheneras Jaya, 27200 Kuala Lipis, Pahang. Furthermore, this research also focuses on the material and equipment utilised to instal the ceramic tiles, as well as the conclusions and recommendations of the ceramic tile construction.

Ceramic tiles can be defined as a tile made from clay that has been permanently hardened by heat, often having a decorative glaze. Ceramic tiles have several advantages and benefits. First of all, ceramic tiles are an excellent choice for outdoor usage since they are a hard, long-lasting flooring material made of clay moulded into thin sheets and fired in a kiln. Moreover, it's also less difficult to cut and install and the best benefits of this ceramic tiles is it also come in a larger selection of colours and shapes. So, many choices can be made.

3.2 Background of the Project

Based on the case studies, the project was carried out in practical training is project construction to overhaul and maintenance the ceramic tiles at Surau Taman Perumahan Cheneras Jaya, 27200 Kuala Lipis, Pahang.

The total amount of the construction to overhaul and maintenance the ceramic tiles is RM100,000 (One Hundred Thousand). Contract period for this project is 3 months starting from 14 September 2021 and the completion date is on 15 November 2021.

In the construction project, there are parties who are directly involved and responsible for the project's completion. Pejabat Daerah dan Tanah Lipis issued this project, with AAFA Rezeki Enterprise serving as the main contractor. In addition, as a subcontractor, Agro Bina Enterprise is one of the parties involved in the construction and completion of this ceramic tile installation. AAFA Rezeki Enterprise is owned by Mr. Muhammad Azri Bin Ahad, who is also the project's main contractor.

3.3 Material Used to Install the Ceramic Tiles

In the construction of installing ceramic tiles, there have some material to be used for completion the construction of the ceramic tiles.

3.3.1 CEMENT



Figure 3.1 Ordinary Portland Cement (OPC)

The most extensively used form of cement is ordinary Portland cement, which is suited for all types of concrete building. With yearly global production of roughly 3.8 billion cubic metres, it is the most widely manufactured and utilised form of cement on the planet. So, this cement were used to make concrete under the ceramic tiles. A binder is a substance used in construction that sets, hardens, and clings to other materials in order to bind them together. Cement is typically used to bind sand and gravel (aggregate) together rather than on its own. Tile adhesive is pre-mixed and precisely manufactured from OPC, fine sand, and additives to increase its key qualities for tile installation.

3.3.2 LATEX



Figure 3.2 Latex

Latex admixture mix with cementitious tile adhesive, cement sand mortar, color grout to enhance bonding for tile adhesive, color grout, cement sand mortar for internal and external, wet and special area.

3.3.3 ADHESIVE BEDDING



Figure 3.3 Adhesive for tiles

To prevent poor performance and failure, adhesive bedding should be mixed with consistent proportions. When using proprietary goods, always follow the manufacturer's recommendations, especially when it comes to combining quantities, process, and slaking time.

3.3.4 GROUT



Figure 3.4 Grout

Grout by definition is a thin mortar used to fill cracks and crevices in masonry. Grout is a dense, viscous fluid comprised largely of water, cement, and, in certain cases, sand. Apart from sealing tile seams, it has a variety of purposes. It's also utilised to strengthen existing buildings and walls, as well as filling voids, embedding rebar in masonry, and even connecting concrete sections.

3.3.5 SAND



Figure 3.4 Sand

Sand is for mixing with cement to make grouts, renders and floor screed.

3.3.6 AGGREGATES



Figure 3.5 Aggregates

The term 'aggregate' refers to any particle substance. Gravel, crushed stone, sand, slag, recycled concrete, and geosynthetic aggregates are all included. Aggregate might be organic, synthetic, or recycled. Aggregates make approximately 60-80% of the total concrete mix. They give concrete its compressive strength and mass. Aggregates are chosen for its durability, strength, workability, and ability to accept finishes in any given concrete mix. So, its suitable choice for making a concrete mix as a base for ceramic tiles.

3.4 Equipment Used in the Project

In the construction of ceramic tiles, there also have some equipment to be used for completion the construction of installing the ceramic tiles.

3.4.1 Manual Tile Cutter



Figure 3.6 A manual tile cutter

A decent manual tile cutter is one of the most crucial items you'll need. It's versatile, lightweight, and simple to use, making even the most difficult work a breeze. A manual tile cutter not only has a faster cutting speed, but it can also be operated with just one hand. Whether you're dealing with ceramic or glass, the cut is clean and accurate, and it has no effect on the quality of the surface material.

3.4.2 Tile Mortar Mixer



Figure 3.7 Tile mortar mixer

Thinset is a kind of glue that is frequently referred to as "mortar." Cement, water, and fine sand are mixed together. It is utilised in commercial applications, "wet wall" applications (such as a shower floor), and with heavier tiling materials as Ankara Travertine Stone Tile to secure your tile to the substrate.

3.4.3 Rubber Bucket



Figure 3.8 Rubber Bucket

The good old rubber bucket is one of the most critical tile installation equipment that is frequently disregarded. Rubber buckets are easier to clean than plastic buckets, not just because they may be used to mix or transport mortar.

Even if the mortar is entirely dry, cleaning a rubber bucket takes less time than cleaning a hard plastic bucket. Rubber buckets are a great addition to your tiling toolkit since they are both durable and adaptable.

3.4.4 Tile Trowel



Figure 3.9 Tile trowel

Tile trowels are necessary equipment for laying tile mortar on floors especially for this project, the construction of ceramic tiles. They do more than just transport mortar from your mixing bucket to the job site. A trowel can also be used as a metered dispensing device, supplying the exact quantity of mortar needed for the tile. A tile trowel, like other types of masonry trowels, includes a handle and a flat metal plate for scooping up and spreading mortar onto a comparatively smooth surface.

3.4.5 Rubber Grout Float



Figure 3.10 Rubber grout float

The grout float is a useful tool. One of the most critical aspects of the installation procedure is grouting. The surface would appear uneven and incomplete without it. Grout binds the tiles together by filling up the gaps between them. A rubber grout float is made up of a flexible rubber pad attached to a C-shaped handle.

3.5 Construction of Ceramic Tiles

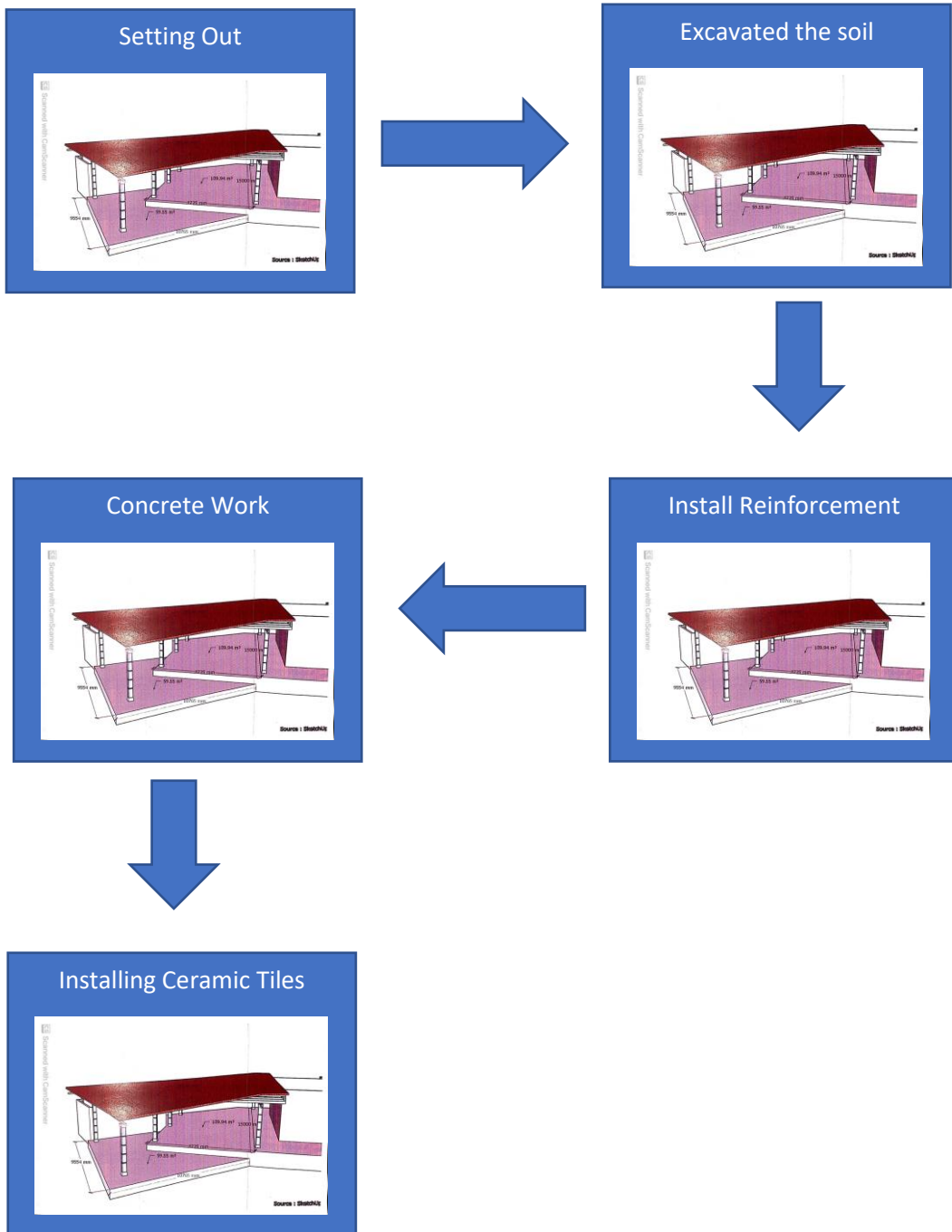


Figure 3.11 Construction method of installing ceramic tiles

3.5.1 Setting Out

Firstly, method of the construction of ceramic tiles is setting out. Setting out is the process of transferring architectural proposals from drawings into the ground. It determines the locations of site borders, foundations, columns, wall centre lines, and other structural elements. In the construction of ceramic tiles, first thing that must be determined is the length and the width of the area to install the ceramic tiles. There are two areas in this project. Area 1 is on top, while Area 2 is on the bottom. The area 1 that has to be set out is 20' x 20', and the area 2 that needs to be set out is 15' x 13'. There are three parties will be involved in the work of setting out, such as, employers, engineers and contractor. The purpose of laying out is to establish the exact area where the ceramic tiles will be installed before beginning the excavation operation.

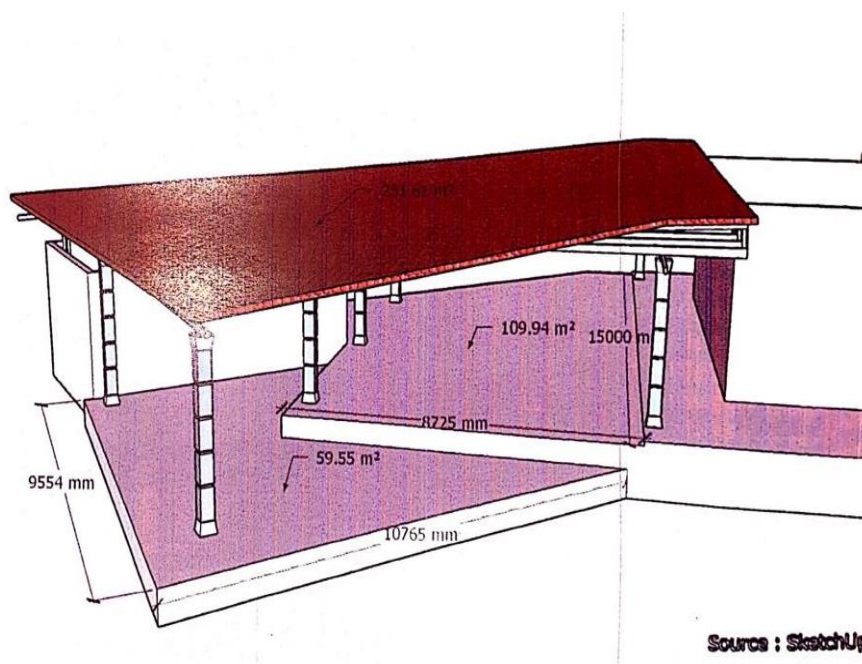


Figure 3.12 Floor Plan of area to install the ceramic tiles in Surau Taman Perumahan Cheneras Jaya

3.5.2 Excavate the soil

First thing to do before doing this excavation works is to demolish the old ceramic tiles. Its purpose is to make the process of excavating the soil simpler. The old ceramic tiles were destroyed with the use of a jet hammer. Figure below shows the old ceramic tiles that have been demolished, as well as the worker who is demolishing the old ceramic tiles with a jet hammer.



Figure 3.13 Ceramic tiles been demolished



Figure 3.14 Workers are using jet hammers.

Excavation is the process of removing soil to create a hollow in the ground in building terms. Excavation can be done manually on small sites or in limited locations with instruments like picks, shovels, and wheelbarrows. Larger-scale excavations will necessitate the use of heavy machinery such as bulldozers and backhoe. Because this is a small project, the excavation work was done with tools like picks, shovels, and wheelbarrows.

In addition, sand was used to level the flooring after process of demolished the existing tiles. The sand needs to be levelled and compacted using a hand compactor machine so that the floor that is built does not settle later. Before the concrete work is done, a spray of termite poison is made on the sand of the house floor and sidewalk just before the concrete is poured. Site preparation, levelling, and excavation are all completed on the same day and take only one day to complete. Figure below shows condition of the finished floor sand is levelled.



Figure 3.15 The condition of the finished floor sand is levelled

3.5.3 Install reinforcement

The next step, after excavate soil work is completed. The work of installing the reinforcement can be done. Installation of the floor reinforcement is one stage in the construction of ceramic tiles. In building, reinforcement is an important material. It's a framework that helps to support a structure. The goal of the reinforcement in this structure is to increase the concrete's strength. Because concrete is strong in compression but weak in tension, this is the case. Shear forces exist on portions of the structure in addition to compression and tensile forces.

The type of steel used in the installation of reinforcement is the most critical factor. All types of steel bars used for reinforcement must be free of corrosion, oil, paint, dirt, soil, or other elements that might compromise the concrete's strength. Beside that, the reinforcement used in this project is BRC steel. Reinforcing Fabric of Steel (BRC) is a steel reinforcement material in concrete. BRC is mainly used for reinforcing concrete (floors, roads, slabs and etc). The figure below shows the worker install the BRC as a reinforcement.



Figure 3.16 The worker are installing the BRC steel

3.5.4 Concrete work

Concrete work will be done after the completion of the installation of the reinforcement at the floor area. Concrete is a mixture made from a combination of cement, sand and aggregate. In this project, the contractor was using G25 grade concrete. Before work pouring concrete is done, the concrete will be tested, by doing some tests, that is slump test and test cube. This test is done to find out the strength of concrete.

There are two area of concrete work for this construction of ceramic tiles at Surau Taman Perumahan Cheneras Jaya, Kuala Lipis. Firstly, concrete at the bottom area and then concrete the top area. Figures below shows the bottom and top that have been concrete.



Figure 3.17 Bottom area were concrete



Figure 3.18 Workers are levelling the concrete floor

Shovels, wheelbarrows, bull floats, finishing trowels, work gloves, and rubber boots were employed in this concrete operation. Because this is a small project, the concrete mix was produced by manually.

The materials for the concrete floor of this house are cement (approximately 100 bags), 3/4 "(15 tons) aggregate stone, coarse/medium sand (2 trucks). The most important thing during the floor concrete work is a mixture of materials namely cement, aggregates and sand so that the floor being built is really solid. The ratio for cement, sand and aggregates for the concrete mixture is 1 bag of cement: 4 wheelbarrow of sand: 1 wheelbarrow of aggregates. The thickness of the concrete is 2.5 inch.

3.5.5 Installing ceramic tiles

After the completion of the work by the carpenter, construction continued with the work of installing the ceramic tiles on the floor space as in the plan. The total cost of buying tiles and installing tiles for this area is approximately RM 23,000.00. The work of installing these tiles took more than a month to complete.



Figure 3.19 Ceramic tiles

After that, prepare the Thin-Set Mortar. A popular bonding agent used to adhere tiles to the backer board or concrete subfloor is thin-set mortar. It's constructed of cement and fine sand, and if buy it will dry so, we have to mix it with water. Following the package guidelines, mix the thin-set in a big bucket with a drill and a mixing paddle. After each usage, clean the mixing paddle immediately to prevent the mortar from hardening on it. Figure below shows the thin set mortar been prepared.



Figure 3.20 Thin-set-mortar

After that, tile trowel had been used to scoop out a generous amount of mortar from the mix bucket. When you're ready to start spreading mortar, use the flat side of the trowel to distribute the thin-set. At a 45-degree angle, press it into the backer board or subfloor. This will guarantee that the mortar adheres completely. Moreover, draw a layout of the completed tile pattern right onto the subfloor while tiling a floor. The lines on the pattern indicate where to begin laying floor tiles and aid in ensuring that the tiles are properly positioned in the room. If the layout lines aren't square, it'll wind up with odd-shaped tiles on the walls.

Then, measure and cut the tiles to fit the area of the floor. As advised by the tile manufacturer, leave an expansion space between the tiles and the wall. The floor and grout will be able to expand without cracking as a result of this. It will also take into consideration the amount of space required for the grout line. Lay out, mark, and cut small groups of tiles at a time, then leave them in the installation area. Before cut, double-check the measurements. The purpose is to prevent mixing too much mortar and having it dry out before all of it can be used, so cut tiles in tiny groups. The figure below shows the ceramic tiles have been installed.



Figure 3.21 Installing the ceramic tiles

The last step in the construction of ceramic tiles is finishing. Once the tile floor is complete, it's time to apply the grout. Grout is used to fill up the gaps between the tiles. Grout, like paint, comes in a range of colours to match or accent the tiles. Remove all tile spacers before grouting. The grout's integrity will be compromised if the spacers are left in situ and grouted over. Furthermore, mix the grout according to the package guidelines. Spread the grout in sweeping arcs with the rubber grout float held at a shallow angle once it's ready. Also, fill the joints completely with grout by pressing it into the joints.

In addition, remove the excess grout promptly to avoid grout haze. When grout dries on a tile, it dulls the sheen, resulting in grout haze. To remove excess grout, use a moist sponge to make gentle diagonal sweeps across the tiles. Before cleaning, wring the sponge until no water falls from it after each portion is completed. The consistency of the grout might be affected by too much water. Rinse the sponge in clean water on a regular basis, and replace the water as needed. The cleaner the water is, the better it will dissolve the grout from the tiles' surface. Make sure all the haze dries completely before it become harder to remove. The figure below shows the ceramic tiles have been done installed.



Figure 3.22 Installation of ceramic tiles is done

CHAPTER 4.0

CONCLUSION

4.1 Conclusion

The conclusion of this report is about the installation of ceramic tiles, that located at Surau Taman Perumahan Cheneras Jaya, Kuala Lipis, 27200 Pahang for AAFA Rezeki company. The objective of this report is to identify the material and equipment used for installation of ceramic tiles. From this report, that can find out the installation of ceramic tiles is beginning from setting out, excavate the soil, installation of reinforcement, concrete work and installing the ceramic tiles. Other than that, this report described the material and equipment used for the installation of ceramic tiles. Material used in this installation of ceramic tiles is cement, sand, aggregate, latex, grout and adhesive bedding. While, the equipment used is manual tile cutter, tile mortar mixer, rubber bucket, tile trowel and rubber grout float. From this report, the process of installing ceramic tiles at the site and the materials and equipment that should be used for the installation of ceramic tiles can be viewed more clearly via the installation of ceramic tiles at the site.

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APPENDICES

Appendix A: SSM Registration Certificate

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SSM
SURUHANJAYA SYARIKAT MALAYSIA
COMPANIES COMMISSION OF MALAYSIA



BORANG E (KAEDAH 13)

**PERAKUAN PEMBAHARUAN PENDAFTARAN
AKTA PENDAFTARAN PERNIAGAAN 1956**


Dengan ini diperakui bahawa perniagaan yang dijalankan dengan nama

AGRO BINA ENTERPRISE
NO. PENDAFTARAN: 199403027032 (000984827-D)

telah didaftarkan dari hari ini sehingga **5 OKTOBER 2024** di bawah Akta Pendaftaran
Perniagaan 1956, beralamat di **NO. 1, TAMAN LIPIS BARU , 27200 KUALA
LIPIS, PAHANG.**

Bil. Cawangan: TIADA

Bertarikh di **SISTEM EZBIZ** pada **23 SEPTEMBER 2021.**



NOR AZIMAH BINTI ABDUL AZIZ
Pendaftar Perniagaan
Semenanjung Malaysia

UseID: EZBIZ, Date: Thu Sep 23 11:07:16 MYT 2021

Appendix B: CIDB Registration Certificate

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PERAKUAN PENDAFTARAN

Adalah dengan ini diperakui bahawa kontraktor yang dinyatakan di bawah ini telah berdaftar dengan Lembaga mengikut Bahagian VI Akta Lembaga Pembangunan Industri Pembinaan Malaysia 1994. Pendaftaran ini adalah tertakluk kepada syarat-syarat yang telah ditetapkan bersama perakuan ini.

No. Pendaftaran : 1970227-PH023757
Nama Kontraktor : AGRO BINA ENTERPRISE
Alamat Berdaftar : NO. 1, TAMAN LIPIS BARU
27200 KUALA LIPIS
PAHANG
Daerah : LIPIS
Tarikh Mula Berdaftar : 24/02/1998

<u>GRED</u>	<u>KATEGORI</u>	<u>PENGGHUSUSAN</u>
G1	B	B01 B02 B04 B14 B24
G1	CE	CE01 CE08 CE21 CE34 CE36 CE43

Tarikh Mula Berkuatkuasa : 16/12/2019
Tarikh Habis Tempoh Perakuan : 29/03/2023

STATUS: AKTIF

A handwritten signature in black ink, appearing to be 'H. J. ...', written over a faint circular stamp.

Ketua Eksekutif
Lembaga Pembangunan Industri Pembinaan Malaysia
Tarikh: 16/12/2019



Appendix C: CIDB Government Employment Procurement Certificate



SIJIL PEROLEHAN KERJA KERAJAAN

Adalah disahkan syarikat/Firma ini adalah berdaftar dengan Lembaga Pembangunan Industri Pembinaan Malaysia dan tertakluk kepada syarat-syarat termaktub bersama sijil ini.

No. Pendaftaran : 1970227-PH023757
Nama Kontraktor : AGRO BINA ENTERPRISE
Alamat Berdaftar : NO. 1, TAMAN LIPIS BARU
27200 KUALA LIPIS
PAHANG
Daerah : LIPIS
Tarikh Mula Berdaftar : 24/02/1998

<u>GRED</u>	<u>KATEGORI</u>	
G1	B	(Pembinaan Bangunan)
G1	CE	(Pembinaan Kejuruteraan Awam)

PEGAWAI SYARIKAT YANG DITAUHIAHKAN

NURUL IZZAH BINTI BADERU KHISAM
BADERU KHISAM BIN SHAMSUDDIN

NO. K/P

990509065858
660107106723

Tarikh Mula Berkuatkuasa : 16/12/2019
Tarikh Habis Tempoh Perakuan : 29/03/2023

Ketua Eksekutif
Lembaga Pembangunan Industri Pembinaan Malaysia
Tarikh: 16/12/2019



Appendix D: Contractor Service Centre Certificate



BAHAGIAN PEMBANGUNAN KONTRAKTOR DAN USAHAWAN

KEMENTERIAN PEMBANGUNAN USAHAWAN

SIJIL KONTRAKTOR KERJA
TARAF BUMIPUTERA

Adalah dengan ini syarikat tuan seperti tercatat di dalam Sijil ini diiktiraf sebagai kontraktor kerja bertaraf Bumiputera. Pemberian pengiktirafan ini adalah tertakluk kepada syarat-syarat termaktub di belakang sijil.

<u>NO. SIJIL PENDAFTARAN</u>	<u>GREJID PENDAFTARAN</u>	<u>KATEGORI</u>	<u>TEMPOH SAH LAKU</u>
1970227-PH023757	G1/Kelas F G1/Kelas F	B CE	DARI : 18/12/2019 HINGGA : 29/03/2023

NAMA DAN ALAMAT BERDAFTAR

AGRO BINA ENTERPRISE
NO. 1, TAMAN LIPIS BARU
27200 KUALA LIPIS
PAHANG
LIPIS

PEGAWAI SYARIKAT YANG DITAUJIAHKAN

NURUL IZZAH BINTI BADERU KHISAM
BADERU KHISAM BIN SHAMSUDDIN

NO. K/P

990509065858
660107106723

(MARLINA BINTI RAMLY)
PENGARAH
Bahagian Pembangunan Kontraktor Dan Usahawan
Kementerian Pembangunan Usahawan
Tarikh: 18/12/2019

