



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

DEFECTS WORKS AT KL TRADERS SQUARE GOMBAK

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DECEMBER 2018

It is recommended that the report of this practical training provided

By

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entitled

Defects Works at KL Traders Square Gombak

accepted in practical 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 KENGWINGSTON SDN BHD for duration of 14 weeks starting from 3 September 2018 and ended on 7 December 2018. It is submitted as one of prerequisite requirement of DBG 307 and accepted as a partial fulfilment of the requirement for obtaining the Diploma in Building.

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Thank you so much.

ABSTRACT

Defects in a building sometimes cause by a poor workmanship, design in error or improper building structure during the construction time. This report will be discussing about the outstanding defects happen in a building that was conducted based on a condominium project located at *KL Trades Square at Jalan Gombak, Setapak, 53000, Kuala Lumpur*. The Objective of this report is to identify the outstanding defects that occur in a building after handover the key process, to determine the best solution of each existing defects in a building and to provide the solution of each existing defects in a building.

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CHAPTER 1

INTRODUCTION

1.1 Introduction of defects in a Building

The construction industry all around the world is getting modern, advance and growing from time to time. Despite of the development, construction industry is still facing with one biggest problem which is *building defects*. *Structural Engineers* are always struggle to overcome challenge of defects in buildings but it is hard and difficult to deal with it completely.

A defect is a building failure or design error that reduces the value of the building, and causes a dangerous condition mostly to the developer and contractor. A construction defect can increase due to many factors, such as poor workmanship, the use of inferior and faulty materials, design errors, failure of building maintenance and misuse of the building.

1.2 Defect Liability Period

The Defect Liability Period is defined as the period of time from the date received the delivery of vacant possession and keys to the property, where the developer is responsible to rectify any defects that already received from the defects notifications form as outlined in the formal instrument of agreement between the Principal (developer) and the Contractor (builder). This defects liability period will be outlined in the 'Owner's Manual' provided by the principal on handover.

The defect liability period in Malaysia typically lasts for 18 months. But at KL Traders Square, the liability period or also known as defects warranty is given for 2 years. So within this period, the homeowner/residents need to check and inspection for any damage, defects, and poor or faulty workmanship arising in their units. Any issues found need to be reported back to the developer by submitting through the defects notifications form to get them repaired for free.

The approach employed on receipt of alleged defective building work is to send a representative to assess the building work and then make a decision as to whether the builder has liability for performing rectification work. Damage caused by use or by other contractors from nominated sub-contractors is not the builder's responsibility.

Usually for a new home of about 1,200 sft, it may take anywhere between 2 to 6 hours to complete the inspection (depending on how thorough inspection want to be).

1.3 Scope of Study

The study concentrates on the procedure to rectify the outstanding defects unit which arising at the project in *KL Trades Square at Jalan Gombak, Setapak, 53000, Kuala Lumpur*. This study was carry out to understand/identify the correct method and provide the best solution in rectifying the defects work that occur. In the early stage of defects work, it is important to determine which sub-contractors that involve in the defects work such as whether the main contractor, tiler, plumber, electrician or air-conditioner suppliers. This step can be seen based on the defects list received.

1.4 Objectives

These are the several objectives have been developed for this report as follows:

- i. To identify the outstanding defects that occur in a building after handover the key.
- ii. To determine the best solution of each existing defects in a building.
- iii. To provide the solution of each existing defects in a building.

1.5 Method of Study

There are many methods to collect data about my studies: -

a. Observation

The observation is by visiting the site area in the project by learning the method and procedure of the defects works for 3 months of internship.

b. Interview

Interview session is one of the methods to understand the topic need to be learnt. People that have been interviewed are the project manager, site supervisor and the defects team. This interviewed held in the site and the company's office.

c. Document reviews

Document reviews was referring from such as defects list form, floor plan lay out, standard operating procedures, progress report and others.

CHAPTER 2

COMPANY BACKGROUND

2.1 Introduction of Company

Kenwingston Sdn. Bhd. provides construction and property development services. It also supplies various types of heavy machinery for construction projects in Malaysia. The company was founded in 2010 and is headquartered in Wangsa Maju, Kuala Lumpur, Malaysia.

Kenwingston Sdn. Bhd. are a Construction Industry Development Board (CIDB) Malaysia 80% scorer based on the Quality Assessment System in Construction (QLASSIC). Such a track record is exceptional in the country's construction industry.

This company use a valued engineering and effective construction best practices and through sheer hard work to deliver the construction and developments.

The team comprises young and dynamic multidisciplinary professionals and experts in the fields of construction, precast design, precast set-up and provision of machinery.

Kenwingston's achievement in the construction industry has been great. This company track record shows massive growth in the company order book within five years into the operations.

Back in July 2010, the company had a paid-up capital of RM16 million. As of 31 December 2016, the total value of the completed projects stood at multi-billion ringgit comprising *high-rise buildings, high-end shop offices and super link houses*.

Kenwingston is now a property developer. Construction, which used to be the main area of business, now ably supports the property development activity.

Why Kenwingston decided to move from construction to development is because expertise in property construction has empowered this company to build even more quality products to achieve a higher level of customer satisfaction.

This company continually working hard to deliver luxurious homes and they want the customers to feel proud buying properties developed by Kenwingston and to feel a sense of belonging as a Kenwingston community.

Kenwingston are driven by a passion for innovation and embrace harmony between human habitation and nature in our projects through architecture to improve the quality of life and liveability.

2.2 Organization Chart

The organization chart of this company as shown in figure 2.1: -

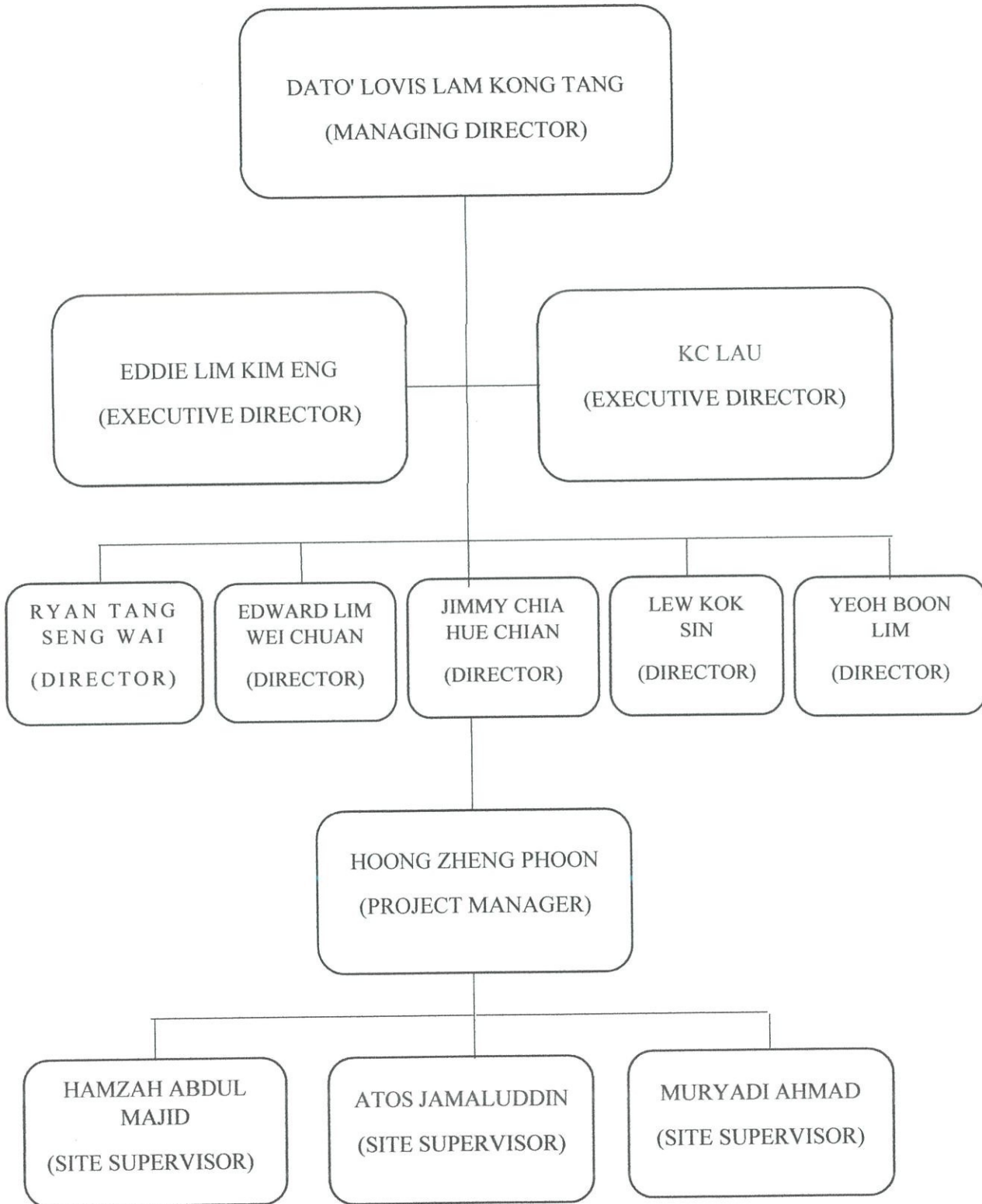


Figure 2. 1: Organization chart of the company

2.3 List of project

2.3.1 Completed project

There are several project that have been done by this company as shown in table 2.1:

Table 2. 1: The complete project

NO.	NAME OF PROJECT	LOCATION	DEVELOPER	DATE OF COMPLETION (YEAR)
01.	The Wharf Residence	Puchong, Selangor	Bolton Berhad	2013
02.	De Centrum Residence	Sepang, Selangor	Protaslo Berhad	2015
03.	Almyra Residence	Bangi, Selangor	IOI Properties Group	2017
04.	Season Garden	Wangsa Maju, Kuala Lumpur	SCP Group	2017
05.	Conexion	Sepang, Selangor	IOI Properties Group	2017
06.	KL Traders Square	Gombak, Kuala Lumpur	SCP Group	2018

2.3.2 Current Project

There are several project that still in progress by this company as shown in table 2.2:

Table 2. 2: The current project

NO.	NAME OF PROJECT	LOCATION	DEVELOPER
01.	Kenwingston Square Garden	Cyberjaya	Kenwingston Sdn.Bhd
02.	Kenwingston Avenue	Sungai Besi	Kenwingston Sdn.Bhd
03.	The Societe	Desa Sri Hartamas	SCP Group

CHAPTER 3

3.0 THE DEFECTS IN A HOUSE UNIT OF BUILDING AT KL TRADERS SQUARE GOMBAK

3.1 Introduction of Defects in a House Unit of Building at KL Traders Square

KL Traders Square is a modern high rise development located squarely at Jalan Gombak in Kuala Lumpur. It is a mixed development where included large number of house units and shop lot. KL Traders Square consist of 5 blocks and total of almost 2600 units. This project starts on April 2015 and finish on July 2018 where the vacant possession (VP) or also known as handover key to the house owner started.

KL Traders Square is undoubtedly one of the most highly anticipated developments to be located in the neighbourhood of Gombak. It is situated within minutes of Setapak which is a highly developed and busy area preferred by investors, and is close to the upcoming Bandar Baru Sentul. Situated in as prime a location, KL Traders Square is only 15 minutes away from the Kuala Lumpur city centre.



Figure 3. 1: Location plan for the site

Source: Google Map

This structure project already complete and now its entering the phase of repairing the defects works after the VP. The main focus activities that still on going in this project is maintaining the structure building whereby defects team is needed in this phase. There several parties involved in this defects works such as shown in the table 3.1 below.

Nominated Sub-Contractor (NSC)	Domestic Sub-Contractor (DSC)
High Speed (Cold Water And Sanitary Piping)	Dsc Ceiling (Ceiling Works)
Sri Cool (Air-Conditioner Service)	Sy Tiling (Tiling Work)
Almanah (Electrical Service)	Mizan Defects Team
Kst Aluminium (Window & Sliding Door)	

Table 3. 1: Parties involve in KL Traders Square project

3.2 Step and process in identifying the outstanding defects that occur in a Building.

Defects is arising due to error or omission, that is breach of contract or negligence by a designer or contractor, but defects may still occur as it is natural process which can be minimised and avoidable if immediate action is taken. Between the defects liability period for a house unit in the building, there are two types of defects that need to be consider in defects works which are major and minor defects.

3.2.1 Type of Defects in a House Units

There is various type of defects that can occur in a building depends on the unsatisfied comment from the residence.

a) Major defects

Example of major defects such as:

- Pipe Leaking
- Outlet pipe clogged
- Hollow, uneven, scratch, crack of tiling works
- Air-conditioner problem
- Glass window crack
- Uneven plastering wall
- Door damage

b) Minor Defects

Example of minor defects such as:

- rusty materials
- wall stain
- wall chipped
- door noisy
- stain on door
- bend sink
- switch loose
- improper grouting works

3.2.2. The flow chart to determine the defects in a building

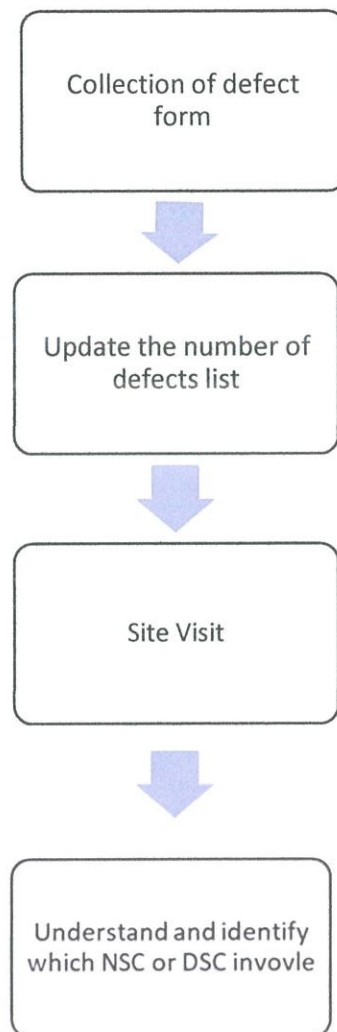


Figure 3. 2: Flow chart of the process to identify the defects

i) Collection of the defects form

Every morning and evening, the site supervisor need to collect the defects form list that is submitted by the owner after the VP process is done. This collection can be made at handover office where situated at Block A, Ground floor level at shop lot number A-335.

Owner or residence that already move in but want to submit another defects, also can submit here until their defects liability period end.



Figure 3. 3: Handover office at KLTS

Source: PropetyGuru.com.my

FORM C1 (Return Of Keys Form)											
RADICAL RANGE SDN BHD KL TRADERS SQUARE											
Address: D-13-01, KLTS, No 99, Jalan Gombak, Setapak, 53000 Kuala Lumpur.											
<p>The Owner wish to surrender the key(s) listed below of above unit to have the rectification works done on the defects mentioned in the Defects Notification Form (Form C).</p> <p>1 Main Entrance Keys : 1</p> <p>2 Others Keys :</p>											
Thank you.											
<p><u>Owner</u></p> <p>Name : NADHIRAH A KHALIM NRIC No : 911012 - 91 - 5028 Contact No : 012 - 308 4948 Date : 18/7/18</p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td colspan="2" style="text-align: center;">For Office Use Only :</td> </tr> <tr> <td colspan="2" style="text-align: center;">Key(s) Acknowledge Received By :</td> </tr> <tr> <td style="width: 50%;">Name :</td> <td style="width: 50%;">Hawin</td> </tr> <tr> <td>NRIC No :</td> <td>780214 025335</td> </tr> <tr> <td>Date :</td> <td>18/7/18</td> </tr> </table>	For Office Use Only :		Key(s) Acknowledge Received By :		Name :	Hawin	NRIC No :	780214 025335	Date :	18/7/18
For Office Use Only :											
Key(s) Acknowledge Received By :											
Name :	Hawin										
NRIC No :	780214 025335										
Date :	18/7/18										
We hereby return the aforementioned key(s) to Owner.											
Key(s) Received By :											
<p>_____ (Owner's Signature)</p> <p>Name Date</p>											

Photo 3. 2: Example of Return of Keys Form

ii) Update the number of defects received

This process is important for every supervisor to update each defect list received every day where later need to be clarify to the developer about the defects progress. Other than defects receive, all the site supervisor also need to update total sign-off defects (defects that already done and signed by owner), total on going defects (defect in progress) and also total complete defects (defects done but signed by owner). From here, the project manager can summarize the outstanding defects works and detects the problem arising at the site.

Defect Report	A		B		C		D		E		Shop lot	
	Plum	Water	Plum	Water	Plum	Water	Plum	Water	Plum	Water	Plum	Water
Total Defect	253	259	215	224	205	205	122	122	136	138	16	17=1036
Total Sign-off Defect	51	72	59	61	92	94	65	68	38	39	7	17=308
Total Complete & Signed Defect	135	148	101	111	4	5	7	5	47	48	16	16=272
Total Pending Defect	7	7	14	14	10	10	9	15	10	8	0	1
Number face more than 14 days	39 unit		75		10 units		6 unit					
Apartment	3		23									

Photo 3. 3: Table for defects update

iii) Site Visit

Depends of the defect list received, the supervisor need to refer the list on which units will the defect works start. Site visit is important before identifying the defects in a building as it can avoid any loss to the contractor or developer. Proper inspection from the supervisor in charge will help to determine the defects whether it a major or minor defects so any problem that can lead to unsolved or overdue defects work can be avoid and settled earlier. Clerk work from developer side also may join the inspection for double inspection of the defects works.



Photo 3. 4: Inspection with the site supervisor



Photo 3. 5: Site visit at selected unit



Photo 3. 6: Inspection with the clerk work

iv) Understand and identify the parties involved

During site visit in the units, site supervisor need to identify the defects work by referring the defect list based on the standard requirements from architecture. This is to avoid to many losses to the contractor side. Some owner will attach with sticker for the defect area that need to rectify after submitting the defects list form which the contractor may also refer the defect location based on the layout of the floor plan unit that attach together with the defect list form. It much easier for the supervisor to detect the defect works.

Number of House Units

Item	List of Defects	Location (refer to plan)	Remarks
33	Rough Door Surface & Paint	Masterbed Bathroom	33
34	Hollow tiles	Bathroom 1	34
35	Rusty Toilet Paper holder	Bathroom 1	35
36	Rough Finishing inside the fall trap	Balcony	36

Item of Defects list

Photo 3. 7: Example of defect list

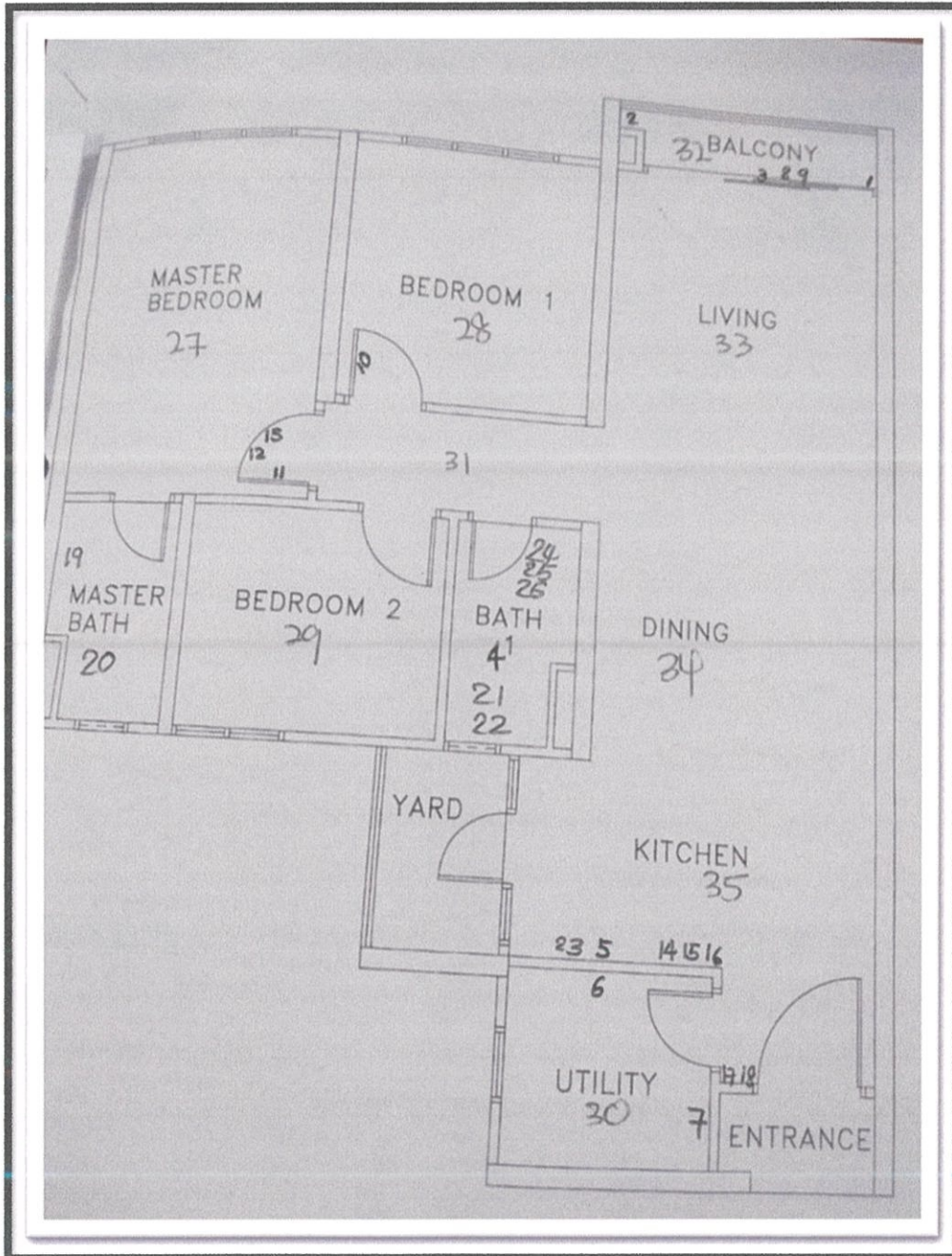


Photo 3. 8: Example of layout of the Floor Plans Units

For example, on how the site supervisor to identify which parties need to rectify the defect work, based on the photo 3.6 above, like item no.34, the defects is hollow tiles. For Hollow Tiles defects, the site supervisor will check first based on the location of the tiles defects by referring from the layout floor plan whether the tiles is truly hollow or not, if hollow sound was found more 15%, the tiles will immediately mark for rectifying work. Then site supervisor will call the tiling worker to start the works.

This process will repeat with other hollow tiles as well. For item no. 35, the defect is rusty of toilet paper holder. For toilets materials, this defects will be doing by the NSC which is to the plumber. Site supervisor then will inform the High Speed company for changing the new one of paper holder.

3.3 Solution in rectifying the defects works

1. Pipe Leaking

Most major pipe leaking usually this can be seen when the area of shower at bathroom get watery. This is because there is a rainwater downpipe installed in the shower area or also known as box up area. The first step is to inform the plumber about the watery area and call them for inspection. When the leaking area has been identified, the box up area need to be hacked. After the hacking work is done, usually the leak will be seen directly from the rainwater downpipe. Mostly cases of this leaking occur because of the loose of internal pipe connection. Then the plumber usually will use the proxing to seal back the loose area. For safety concerns, the plumber usually installs an additional pipe that also known as spot pipe. Spot pipe is a pipe that will be install in the box up area and the outlet will go through the floor trap outlet at shower area. The function of this pipe is to let flow any existing water in box up area through the floor trap to eliminate water ponding inside the box up again.

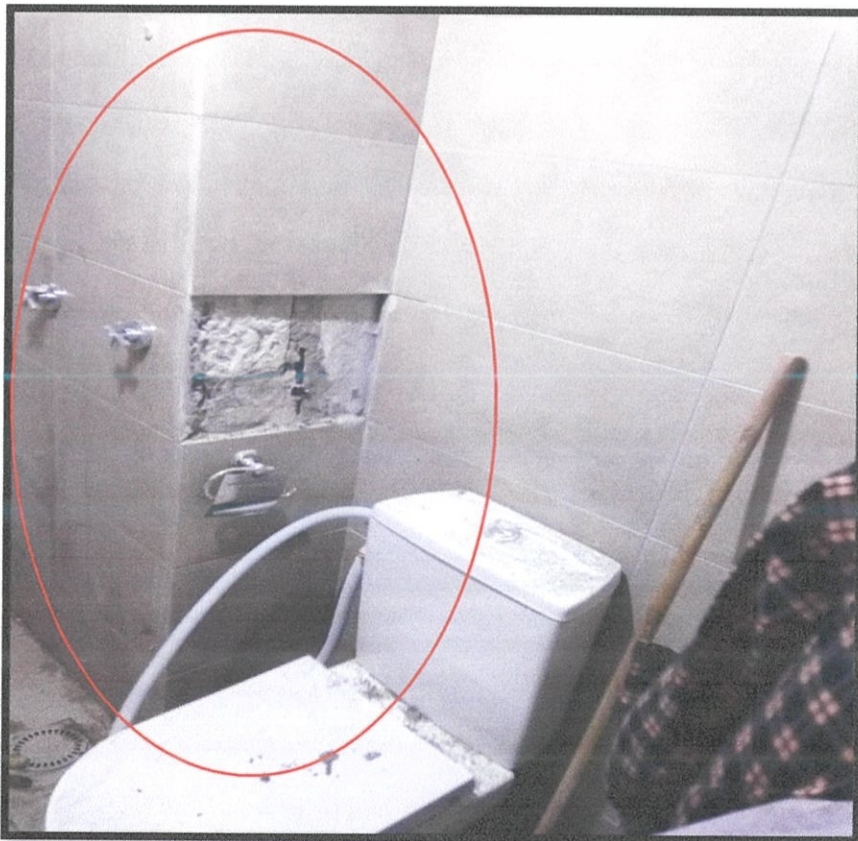


Photo 3. 9: Show the box up area that already been hack



Photo 3. 10: Rainwater downpipe inside box up area

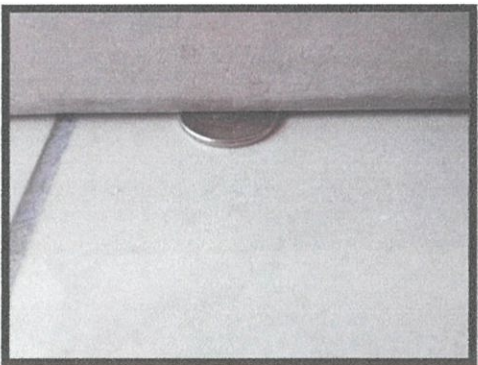
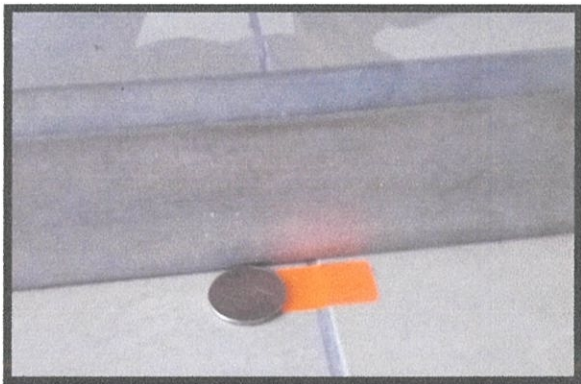
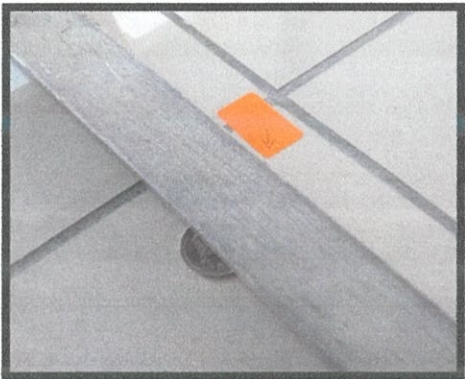
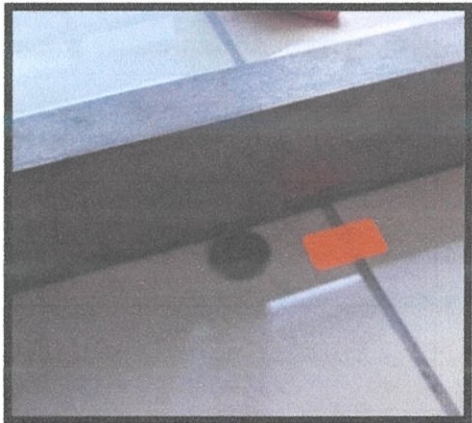


Photo 3. 11: Spot pipe

2. Uneven Tiles

Uneven tiles are the most major tiles defects for tiling works. This defects occur because of the poor workmanship and unbalance of levelling work during installation of the tiles. This defects can cause serious injury to the residence if the levelling tiles was not level based on the specific requirements.

The site supervisor first will determine which tiles is acceptable to rectify and which is unacceptable that did not require to rectify. Aluminium steel and a coin of 2mm thick is required to measure the level of the tiles. The process of identify the acceptable tiles is shown in the table below.

Acceptable	Non-acceptable
	
	

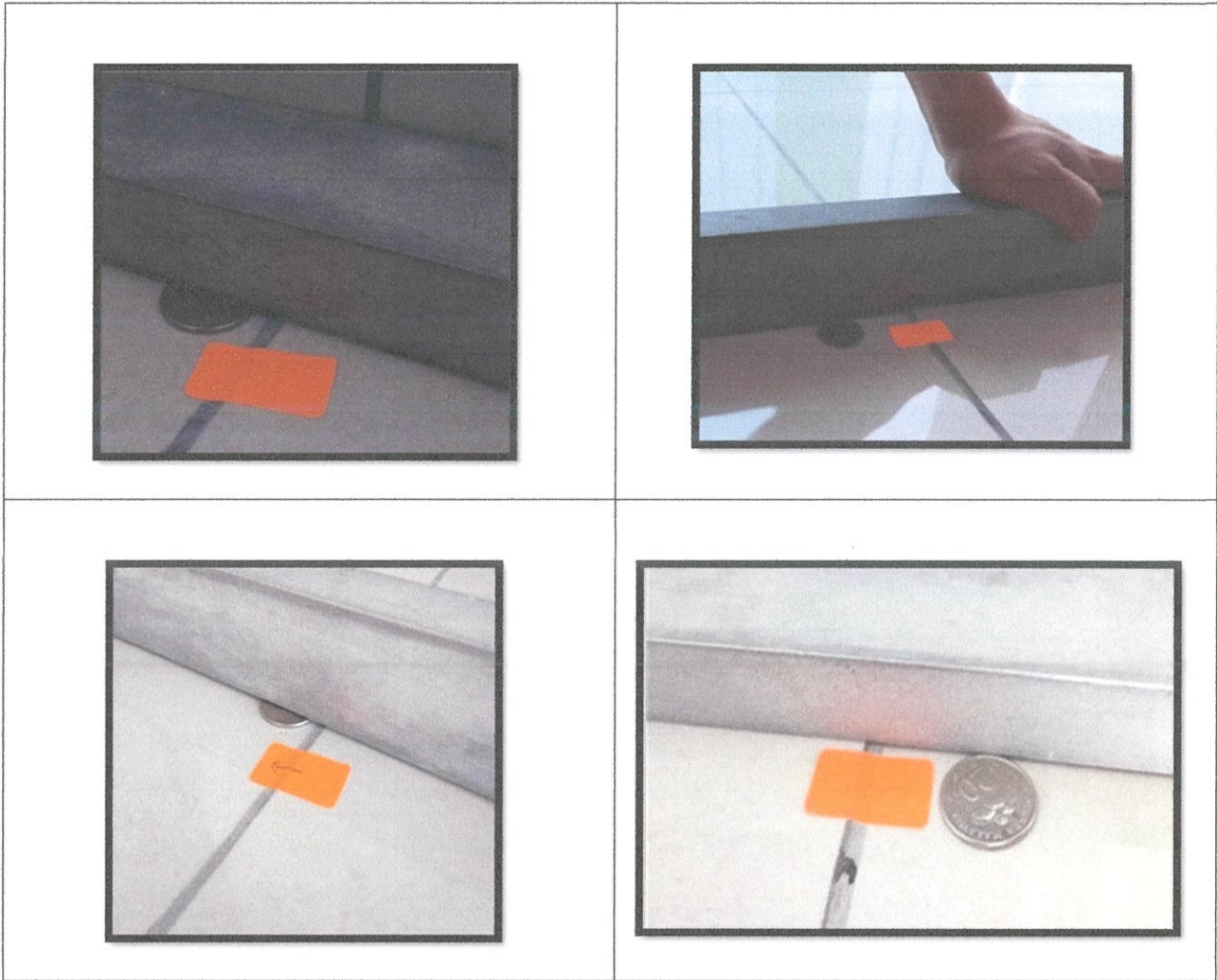


Table 3. 2: Photo of uneven tiles

After the identifying of the tiles that need to rectify, the site supervisor will inform the tiling workers for the rectifying works. Usually it takes 2 or 3 days and 2 or 3 skilled workers to fully rectify the tiles works for a unit. The tiles first will be cut off carefully using grinder machine.



Figure 3. 4: Grinder machine

Source: Google Images

Then the tiles area then will fill back with cement and install back carefully using levelling instrument. Then let it dry for about one day before doing the finishing for the tiles.



Figure 3. 5: Levelling instrument

Source: Google Images

3. Air-conditioner copper pipe leaking

This defects consider as major defects because of the leak at copper pipe will cause the gas from the air-conditioner compressor leak through out the pipe. Site supervisor first need to check and inform the NSC invovled to inspection. Sri Cool as the company for air-conditioner will first identify whether the defects is originally from us or from the renovation workers. This step is important as it could avoid our side lossing money in rectifying works. Below images shown the owner submit the defect about his copper pipe is leaking at the bedroom 2. When the air-conditioner workers do the inspection, they identify that the leak is actually from the the owner's renovation workers as they make mistake during installion on copper pipe connection between our original pipe and their pipe. They bend the pipe so hard until the pipe got leak. So our workers will not rectify the defects as it not their initial fault.

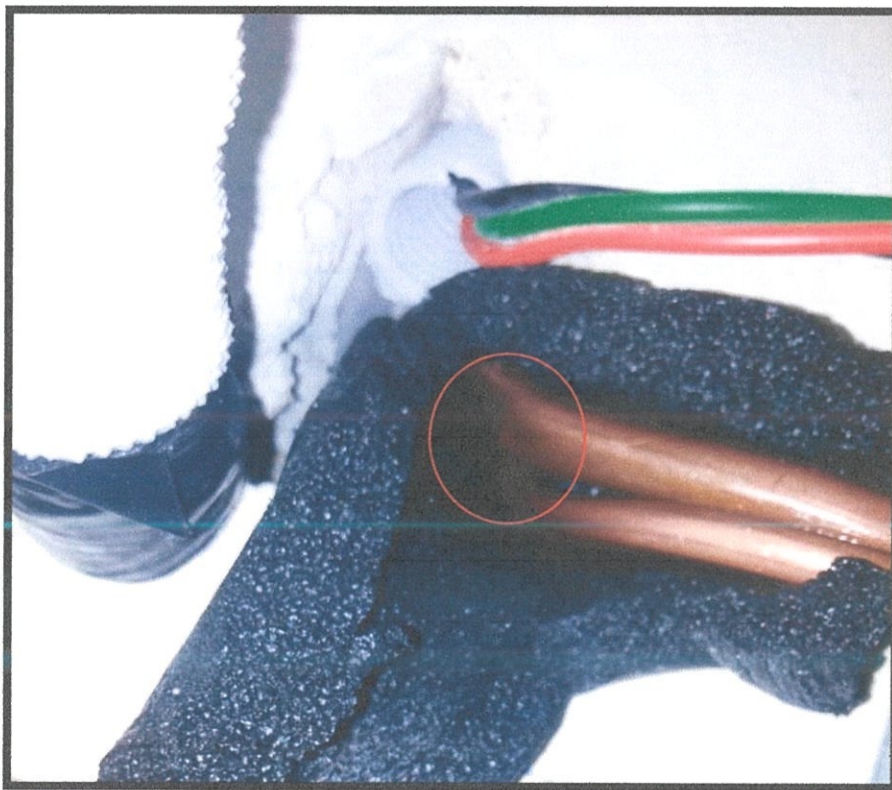


Photo 3. 12: Bending of the copper pipe

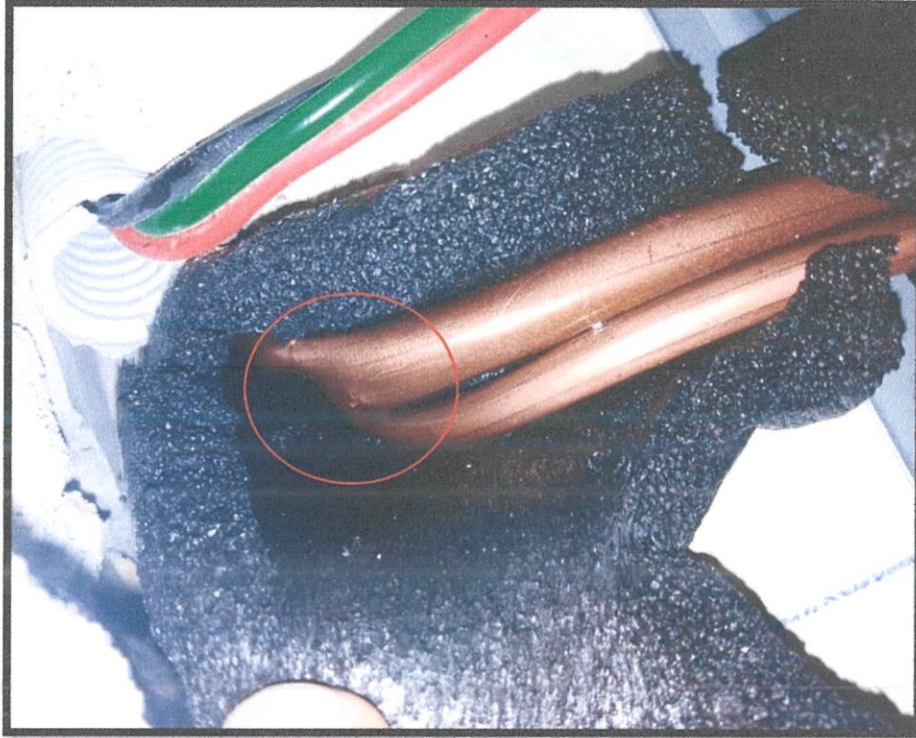


Photo 3. 13: Bending of the copper pipe



Photo 3. 14: Inspection of the worker



Photo 3. 15: Inspection of the workers

CHAPTER 4

CONCLUSION

Defects works is important for every building whether the structure is still in progress or already complete. Early investigation and work done for every defects occur is necessary as it can avoid from the defects become worst, soon can give the residences an uncomfortable living area if the defects are not rectifying quickly.

Therefore, proper action and solution from all parties involved especially from the contractor side is necessary for rectifying works to be smooth and easy to settled. Eventually it could help saving more cost to the company for future.

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