



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

**DILAPIDATION SURVEY FOR PROPOSED CONSTRUCTION
AT SUNGAI ARA**

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

AUGUST 2021 – JANUARY 2022

It is recommended that the report of this practical training provided

By

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Entitled

Dilapidation Survey for Proposed Construction at Sungai Ara

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 efforts, except for extract and summaries for which the original references stated herein, prepared during a practical training session that I underwent at K&P Cove Consultancy Sdn Bhd for duration 20 weeks starting from 23 August 2021 and ended on 7 January 2022. It is submitted as one of the prerequisite requirements of BGN and accepted as a partial fulfillment of the requirement for obtaining the Diploma in Building.

.....

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ACKNOWLEDGMENT

In the name of Allah, Alhamdulillah and grateful for his blessing has allowed me to effectively complete this report in the time given. I would like to thank Allah SWT because this report will not have been completed without his blessing.

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Last but not least, my big thanks to my family members for trusting me to do an internship far from my hometown. This also never makes me forget the opportunity of colleagues for always helping me to do work successfully and also never hesitate to share their skills and experience during internship.

ABSTRACT

Before construction is carried out, a dilapidation survey is an important thing to do because it is a survey current condition for inspection on infrastructure and building in the area around the proposed construction area. This report will explain more about things that related to the dilapidation survey for proposed construction. This dilapidation survey was conducted smoothly and took place in Sungai Ara, Penang. The main objective of this report is to develop a knowledge about the process of dilapidation survey for proposed construction. It will put more focus on how to do an inspection on the next of proposed construction. Not only that, a common defect in dilapidation survey will be recorded by taking a picture to give to the client. Furthermore, during conducting dilapidation, a challenge or obstacles might occur that will give a hard time on the survey. So, the solution must come out to solve and avoid the challenge of running the dilapidation report survey.

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CHAPTER 1.0

INTRODUCTION

1.1 Background of Study

Dilapidation survey is referred to as pre-construction condition survey which will be conducted by a Professional Building Surveyor. It is an inspection of the current condition surrounding buildings and structure before starting a piling, construction or development project. All apparent defects such as crack, water seepage, spalling concrete and other defects will be recorded in pictures with notes. The purpose is to have a detailed record of the condition of the building before and after construction as a cautious step. (Sdn.Bhd, 2008)

A surveyor that defines is a person professionally engaged in surveying. The preparation of a report is a personal service because there's no two surveyors and no two clients will be the same. The content of the report can vary significantly from case to case. As a surveyor, should have a pleasant and tactful personality along with being fluent in the English language. (Glove, 1996)

The main objective of survey is to prepare a report on the condition of a property. A surveyor should understand a law that related to their profession in order to complete a task successfully. The survey concentrated on structural issues that related to the property under survey and deal with building's loadbearing properties. (A.Noy., 2011)

1.2 Objectives

The objective in this study are:

- i. To develop a knowledge about process of dilapidation survey for proposed construction.
- ii. To identify the existing common defect in a dilapidation survey.
- iii. To identify challenges with a solution for going and during dilapidation survey.

1.3 Scope of Study

This study was carried out at Sungai Ara, Penang which was located immediately next to the proposed construction. The study will be focused on dilapidation survey for proposed construction at Sungai Ara, Penang especially the process of it. Besides, the knowledge about common defects in a dilapidation survey and the challenges problem with solutions during the dilapidation survey will be identified in this report. The referred document such as building plans, quotation document, codes of standard are referred to gather all important information for this study.

1.4 Methods of Study

1.4.1 Observation

The observation that has been made for the dilapidation survey are on the site throughout the project and during practical days. Heading to the site with supervisor and two teammates. The total period of time observed for this survey being completed is almost two months including going to site, preparing a report and send it to the client. The supervisor will check the list of work to out assigned before starting work. This activity is recorded by pictures, draft report and an indication in the notebook.

1.4.2 Interviews

The interview that had been conducted by the supervisor consultant and the assistant supervisor consultant was asking the information that related to the process of dilapidation survey for purposed construction at Sungai Ara. The interview was also done by workers from company which giving information about how to do report and provide more information that related to dilapidation survey. This interview is carried out at the dilapidation survey site and at company office. All the information had been written in a noted book as a reference for doing a task.

1.4.3 Document Review

The document reviewed that have been used are: company profile, site plan, list of work to be assigned and picture taken by other workers. The supervisor consultant will provide a company profile. The site plan and list off tasks to be assigned are used as a guide to locate the places that need to be inspected. The picture that is taken by others usually subject to inspection on site.

CHAPTER 2.0

COMPANY BACKGROUND

2.1 Introduction of Company

K&P COVE CONSULTANCY SDN BHD has been established on 29th June 2011 which provides various service that related to development industry services especially Building Surveying and Building Management process. In former times, the company previously known as Cove Consultancy.

The company comprises of professionals who have attained the standard required by Royal Institute of Surveyors Malaysia (RISM). All partners and employees in the company are committed to conduct their operation with the highest level of professional integrity and ethic as defined by the Institute. The main activity of the company is building survey, which sometimes called a condition survey. This is a comprehensive visual inspection on existing building stocks which the survey is carried out to all types of property including commercial, industry, institutional and warehouse buildings.

The company have developed computerized job tracking and quality assurance systems designed to help us ensure the highest level of service and customer satisfaction. Plus, all of their partners are well-trained professionals who have their specialization in different subjects. With this combination of teamwork and technical acumen, this company is able to act as a one-stop center to deliver the best service and support to our client, from survey and design to the actual execution of works and final delivery of product.

The company job tracking and record-keeping system utilizes digital cameras to record works in progress, ensuring better reporting to a client as well as maintaining their own accurate internal reports. In order to achieve the international quality standard, this company is committed to have the quality management system which is to direct and control their activities in order to achieve the international quality standard in order to improve the effectiveness of a performance.

K&P Cove Consultancy Sdn Bhd is located at Bandar Puteri, Puchong Selangor as shown below at figure 2.1. In addition, building elevations for front and main entrance are shown below at figure 2.2 and 2.3.

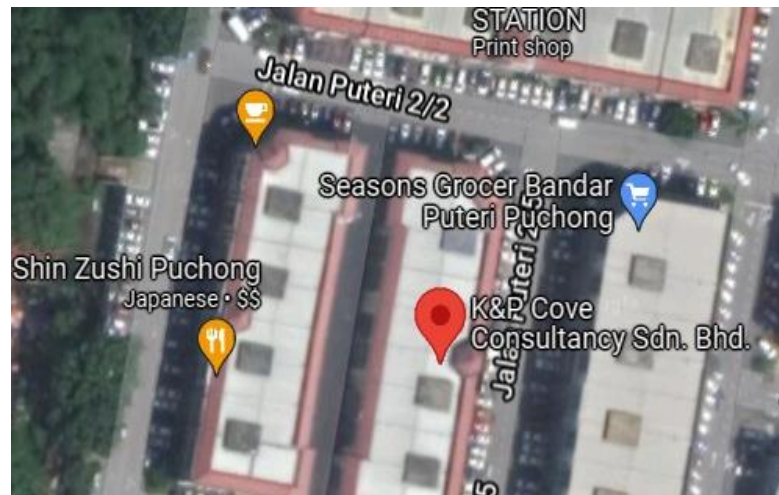


Figure 2.1. Location plan K&P Cove Consultancy Sdn Bhd

Source: <https://maps.app.goo.gl/eKGrYkcg6TzAF4ap7>



Figure 2.2 Main Entrance of K&P Cove Consultancy



Figure 2.3 Front view of K&P Cove Consultancy

2.2 Company Profile



Figure 2.4 Company Logo

Name of Company	:	K&P Cove Consultancy SDN BHD
Incorporation Date	:	1) Cove Consultancy: 5 th December 2007 2) K&P Cove Consultancy SDN BHD: 29 th June 2011
Company Address	:	1) Puchong Office: No. 9-2, 2 nd Floor, Jalan Puteri 2/5, Bandar Puteri, 47100 Puchong, Selangor. 2) Penang Office: No. 5-1, 1st floor, Logan Heritage, Union Street, 10200 Georgeown, Pulau Pinang.
Professional Membership	:	1) Royal Institution of Surveyors Malaysia 2) Pang Ching Chooi
Award/Achievement	:	1) Best Building Surveying Consultancy: 21 st November 2013 2) MYBRS Highest Achiever Building Surveying Consultancy Company Award: 26 th November 2021

Table 2.1 Company profile

2.3 Company Organization Chart

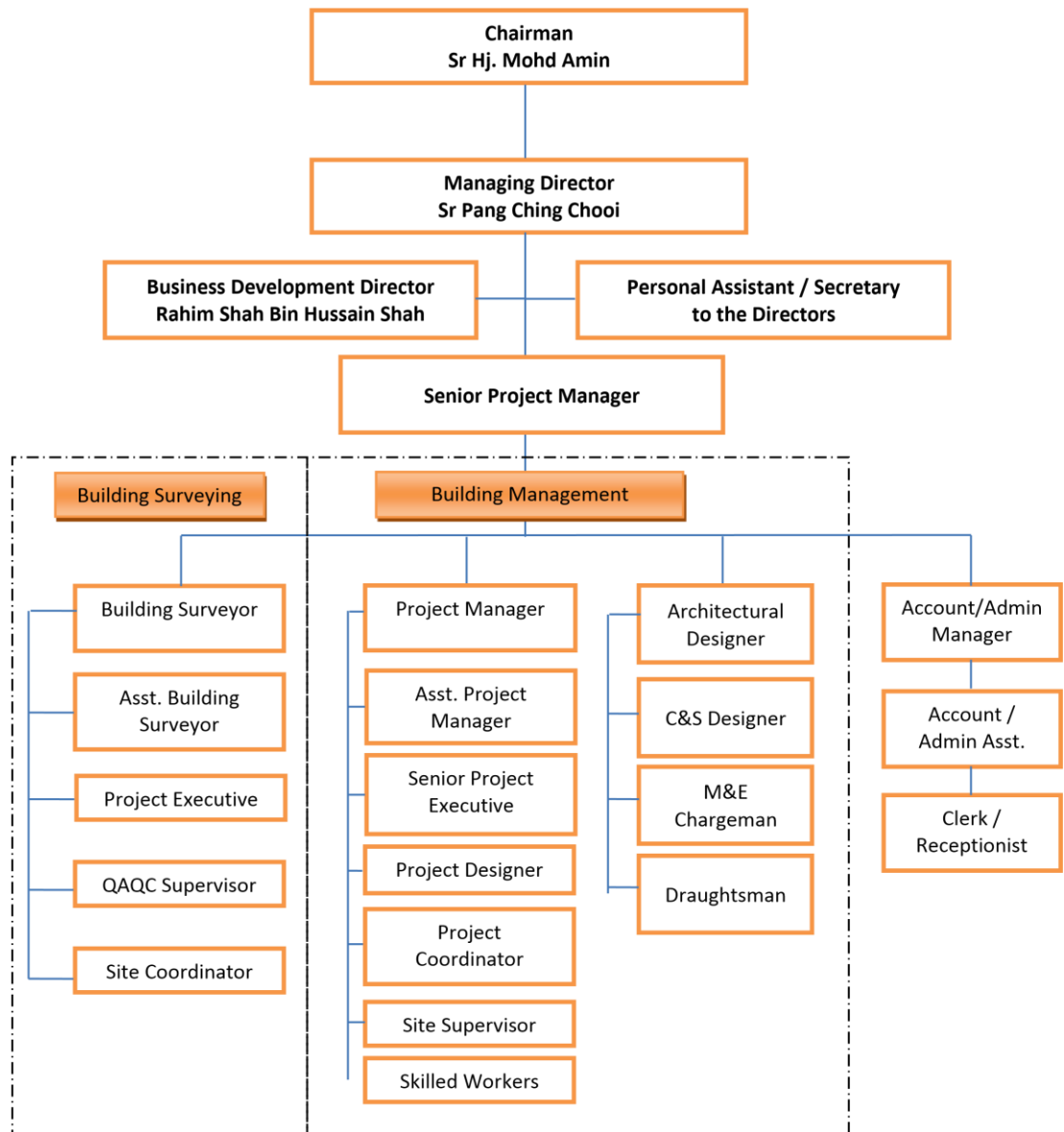


Figure 2.5 K&P Cove Consultancy's organizational chart

2.4 List of Project

2.4.1 Completed Project

No	Job Title	Client	Year Complete
1.	Dilapidation Survey for Project Title: Construction And Completion of The Diaphragm Walls and Associated Works (Package 3b1) for The Proposed Phase 3b Kompleks Dayabumi New Tower Development on Lot 38, 39, 45, and 51, Sekyen 70, Jalan Sultan Hishamuddin, Kuala Lumpur.	Bauer (Malaysia) Sdn. Bhd.	January 2016
2.	Dilapidation Survey for Project Title: Proposed 2 Blocks Service Apartment at Taman Nirwana, Ampang for Sri Seltra Sdn. Bhd.	Le Sky Builders Sdn. Bhd.	January 2016
3.	Dilapidation Survey for Project Title: Cadangan Meroboh dan Membina Semula Sebuah Rumah Banglo 3 Tingkat dengan Separa Basmen di Atas Lot 15108 (No. 124), Jalan Bukit Pantai, Taman Bukit Pantai, Mukim Kuala Lumpur, Wilayah Persekutuan.	Archimetry Sdn. Bhd.	March 2016
4.	Dilapidation Survey for Project Title: Cadangan Pembinaan Satu Blok Pangsapuri Perkhidmatan 28 Tingkat di Atas Lot Pt 37330 (Hsd 105863), Fasa 4D6A, Jalan BK5A/3 Bandar Kinrara, Puchong, Mukim Petaling, Daerah Petaling, Selangor.	Jasmurni Construction Sdn. Bhd.	August 2016
5.	Dilapidation Survey for Project Title: Cadangan Meroboh dan Membina Semula Banglo Dua Tingkat di Atas Lot 4734, No. 19, Jalan 14/2, Taman Tun Abdul Razak, 68000, Ampang, Mukim Hulu Kelang, Daerah Gombak.	Conlay Construction Sdn. Bhd.	November 2016

Table 2.2 List of completed projects

2.4.2 Project in Progress

No	Job Title	Client	Year Complete
1.	Dilapidation Survey for Project Title: Cadangan Penukaran Sistem Pembentukan Vakum Kepada Sistem Pembangunan Graviti di Bandar Parklands, Daerah Klang, Selangor Darul Ehsan untuk Tetuan Gabungan Efektif Sdn Bhd	Gonong Lima Engineering Sdn Bhd.	On-going
2.	Dilapidation Survey for Project Title: Cadangan Membina 3 Blok Pangsapuri Servis (1,567 Unit) Di Atas 2 Tingkat Bersmen Di Atas Lot 497, 498, 499, Jalan Bukit Bintang, Lot Pt 134 (511), 512, 513, Jalan Delima, Lot 503, 504, 1160 & 1181, Jalan Jati, Kuala Lumpur, Wilayah Persekutaun untuk Tetaun Agile Tropicana Development Sdn Bhd	GeoRealtime Sdn.Bhd.	On-going
3.	Dilapidation Survey for Project Title: Kellogg Project Taipan – Adding New Steel Structure Pipe Under Existing Building at Kellogg’s, Labu, Negeri Sembilan – 16 Production Line.	Principle Perspective Engineering Sdn. Bhd.	On-going
4.	Dilapidation Survey for Project Title: Hotel Proposed 29 Storeys of Hotel Parcel B (Phase 2), Office Proposed 13 Storeys of Office Parcel A (Phase 1) At Pt 157, Seksyen 67, Jalan Tun Razak/Jalan David, Bandaraya Kuala Lumpur for LQ Retail Sdn Bhd	WCT Construction Sdn. Bhd.	On-going
5.	Dilapidation Survey for Project Title: Cadangan Pembaikan Tebing Sungai Kelantan dan Kerja-kerja yang Berkaitan di Bandar Pasir Mas, Kelantan.	MMC Engineering Sdn. Bhd.	On-going

Table 2.3 List of projects in progress

CHAPTER 3.0

CASE STUDY

3.1 Introduction to Case Study

The case study about dilapidation survey for proposed construction at Sungai Ara, Penang where has started the dilapidation survey work in 23 September 2021 and the project completed on 12 November 2021 including sending the report to the client. Only company higher-ups have access to cost estimates for dilapidation work surveys and reports. The site of dilapidation survey area is located in the immediate next to the proposed construction area that have a lot of area such as Pangsapuri Tenaga Nasional, Jalan Dato Ismail Hashim, SK Sungai Ara, Balai Polis, Pangsapuri Seri Intan, Hawker & Car Wash which are shown in the figure 3.1.



Figure 3.1 Location of site dilapidation area and proposed construction area

Dilapidation survey is a survey current condition for inspection on infrastructure and building in the area around the proposed construction area and it is also known as pre-construction dilapidation survey. The client, who is a contractor from the construction company, the surveyor who does the dilapidation survey work and the

property owner are all parties participating in the dilapidation survey. The development of construction company will hire contractor for handling the construction project and then the contractor will hire consultant for doing dilapidation survey before the construction is carried out. The purpose of dilapidation survey is to record the existing common defects as references for the client to use when receiving a complaint from the property owner after construction is carried out.

The consultant company will not be made responsible towards property for any consequences that arise during or after the construction process. As a result, if a new defect arises as a result of building, the property owner can file complaint with the construction company and seek compensation. The inspection will not be inspected in the area without permission from property owner which is called as inaccessible area. So, there is anything happen while the construction is carried out, the property owner cannot claim damages on new defects that appear on the property.

3.2 To develop a knowledge about process of dilapidation survey for purposed construction.

QUOTATION AND AWARD

The client will send an email with a quotation to all the consultant companies, and the surveyors will likewise offer the client a quotation. Following that, the client will compare all the quotations given by the consultant companies and choose the one that is closest to the offer given by the client. Then, the client will award the project to the selected consultant company to conduct a dilapidation survey for purpose construction.

PRELIMINARIES SURVEY

Once the consultant company has been awarded, the client will provide details information about the project. The purpose of a preliminary survey for the dilapidation survey areas is to identify the locations of the properties that need to be inspected. The preliminary can be done via online by referring to the map and the surveyor will then record notes in the list of property information to provide an overview of the property as shown in the figure 3.2.

S/n	Address	Owners/ Tenants/ Representative	Letter Submission Record		Date of Inspection	Weather
			First AR	Second AR		
INFRASTRUCTURE						
1.	Jalan Dato Ismail Hashim	-	-	-	25-Sept-21	Sunny
HOUSES						
1.	Pangsapuri Tenaga Nasional	Mr.Ibrah mad 01967221	-	-	24-Sept-21	Sunny
2.	Pangsapuri Seri In	-	-	-	25-Sept-21	Sunny
OTHERS						
1.	Hawker & Car Wash	Mr. Lim Chooi Hoe 0165565187	-	-	25-Sept-21	Sunny

Figure 3.2 Example of the list of properties information that need to be inspected

PREPARATION OF EQUIPMENT AND LETTER

The surveyor will supply all equipment that needed the day before departing for the site because it is personal equipment to carry out and record the tasks for dilapidation survey. There is some equipment that used for dilapidation survey such as measuring wheel, DSLR camera, crack ruler, blank paper and clip board.

The function of measuring wheel as shown in figure 3.3 is to measure a distance of infrastructure and uses circumference of the wheel is to calculate the distance covered.



Figure 3.3 Measuring Wheel

DSLR camera is the most important equipment in dilapidation survey that is used to take a clear and high-definition photo for record an existing common defect as shown in the figure 3.4.



Figure 3.4 DSLR Camera

Crack gauge as shown in figure 3.5 is used to measure the width of a crack on surface. It usually used when have crack 5mm and above.



Figure 3.5 Crack gauge

Safety vest as shown in the figure 3.6 should be worn to ensure safety when conducting inspections on the road as they are made in bright colours. This is because bright colours will allow workers to be identified from a distance even in low lighting and very high visibility.



Figure 3.6 Safety vest

Blank paper is used to sketch a plan layout and record the number of defects for an indication of dilapidation survey area. The use of the clipboard is a blank paper

will be placed on top of the clipboard. blank paper and clipboard are shown in figure 3.7.



Figure 3.7 Clipboard and blank paper

Not only that, the other surveyor will prepare a printed notice letter and completion letter. Notice letter is permission letter of inspection to be signed by the property owner meanwhile completion letter is evidence letter that the property has been inspected by the surveyor. The example of notice letter is shown in the figure 3.8 and example of comprehension letter in the figure 3.9.

Reference No. / 参照编号 / No.Rujukan : CV/PD/DS/0057-GVC-SAP- 9 -N

APPENDIX 1 / 附录表 1 / LAMPIRAN 1

PROPERTY OWNER'S REPLY SLIP/ 业主回复纸/ AKUAN JAWAPAN

Property address / 物业地址 / Alamat Hartanah : SK BUNGA RA
(Tick [v] whichever applicable / 勾选 [v] 适用情况 / Tanda [v] tel. (per/bangunan))

- () YES, I would like the survey to be carried out on
好的, 我想进行检查如下
SETUJU, Saya bersetuju untuk menjalankan pemeriksaan bangunan saya
_____ (date/日期/tarikh) _____ (time/时间/masa) for / untuk:
- () Internal façade of the property (if any) & ground floor only
产业内部 (地下室 (如有) 和 底层 (建筑物与外面地面相平的一层))
Dalam bangunan (tingkat bawah tanah (jika ada) & tingkat aras tanah sahaja)
- () External façade of the property (10 m above from ground level)
产业外墙 (从地面 10 米以上)
Luar bangunan (10 meter di atas tanah)
- () NO, I do not wish to carry out the survey for my property.
不, 我不想展
TIDAK SETUJU, saya tidak bersetuju untuk menjalankan pemeriksaan bangunan milik saya.

Name / 姓名 / Nama : MORNİ BINTI YUSOFF
IC / 身份证号码 : Penolong Kanon Pentadbiran
Tel. No. / 电话号码 : Sekolah Kebangsaan Sungai Ara
Date / 日期 / Tarikh : 9/2021
11900 Bayan Lepas, Pulau Pinang

Figure 3.8 Example of notice letter

Reference No./参照编号/ No.Rujukan: CV/PD/DS/0057-GVC-SAP- 9 -CL

PROPERTY OWNER'S REPLY SLIP/业主回复纸/AKUAN JAWAPAN

Property address / 物业地址 / Alamat Hartanah: SK Sungai Ar

(Tick [v] whichever applicable / 勾选 [v] 适用情况 / Tanda [v] di tempat berkenaan)

NO, the survey did NOT cause any damage/loss to my property and all existing condition(s) had been fully recorded.

没有, 检查过程中我的房子/物业资产并没有任何损坏/损失, 同时所有房子的现有状况已被记录下来。

TIDAK, pemeriksaan ini TIDAK menyebabkan sebarang kerosakan/kehilangan harta benda milik saya dan berada dalam keadaan yang sama ada seperti yang telah direkodkan sepenuhnya.

YES, the survey has caused damage/loss to my property as described below.

Damage or Loss : _____

有, 检查过程中造成我的房子/物业资产有损失/损坏的: _____

YA, pemeriksaan ini telah menyebabkan kerosakan/kehilangan harta benda saya. Kerosakan atau kehilangan : _____

Inaccessible area(s) in your property are as follow:

您的物业禁区如下:

Kawasan yang tidak boleh diakses atau tidak dibenarkan masuk adalah seperti berikut:

a) Kedai Bual, Kofeteria, bilik Kaunseling _____

b) Room _____

c) Kios, Pemukhaan, stor 8, stor, stor _____

d) Pondas, Tempua, Pra Genius, Pra Insalek, stor _____

e) _____

Sayanti

Name / 姓名 / Nama : Sayanti

Figure 3.9 Example of completion letter

APPROACH AND SET AN APPOINTMENT

The surveyor will approach the dilapidation survey area to get a permission from the property owner to inspect the area. If permission is acquired, the property

owner will be given permission letter in which they will be asked to sign that showing acceptance the area that can be inspected. The surveyor will tell a period of time doing dilapidation work and then schedule an appointment with the property owner when it is time to do the dilapidation survey work on the property. If the property owner rejects the inspection proposal, they still need sign a permission letter stating that refuse to allow the surveyor entry and so no inspection or photos will be done. However, approval is not required for the infrastructure sector; the surveyor simply finds free time and inspects the infrastructure. For a vacant building if there is no response after a week, surveyor will file all records to take photos of the external elements area.

INSPECTION

After getting a permission, the inspection work will be started in the dilapidation area and each area will be inspected in a different way. For the infrastructure area, the surveyor will hold and push the chainage on the roads every 20 metres to measure the distance of infrastructure, sketch site layout and do defects indication. The second surveyor will hold the camera to take photos of chainage measurement readings, general views of inspection area and then defects that found in the area.



Figure 3.10 The first surveyor holds the chainage and the second surveyor take a photo

For building inspection area, chainage will not be used but the first surveyor still needs to do a sketch site layout and defects indication while the second surveyor will take a photos general views and defects in the inspection area. the inspection will begin with photographs of general view of the building, followed by photographs of the external area, beginning with ceiling, walls, floor and fence wall. Then, the photographs of internal area will be taken if get a permission from the property owner.

REPORT PREPARATION

After conducting the inspection, the task will be divided as the preparation of a report that need to be send to the client. The preparation of dilapidation report may vary according to the client's request but usually the may contain four photos in a page with a description defects and AutoCAD layout indication for each report. The example of AutoCAD indication layout is shown in figure 3.11 and the example of dilapidation report is shown in figure 3.12. The report and indication will be checked by the assistant supervisor and then the amended work will then be collected for the supervisor's review.

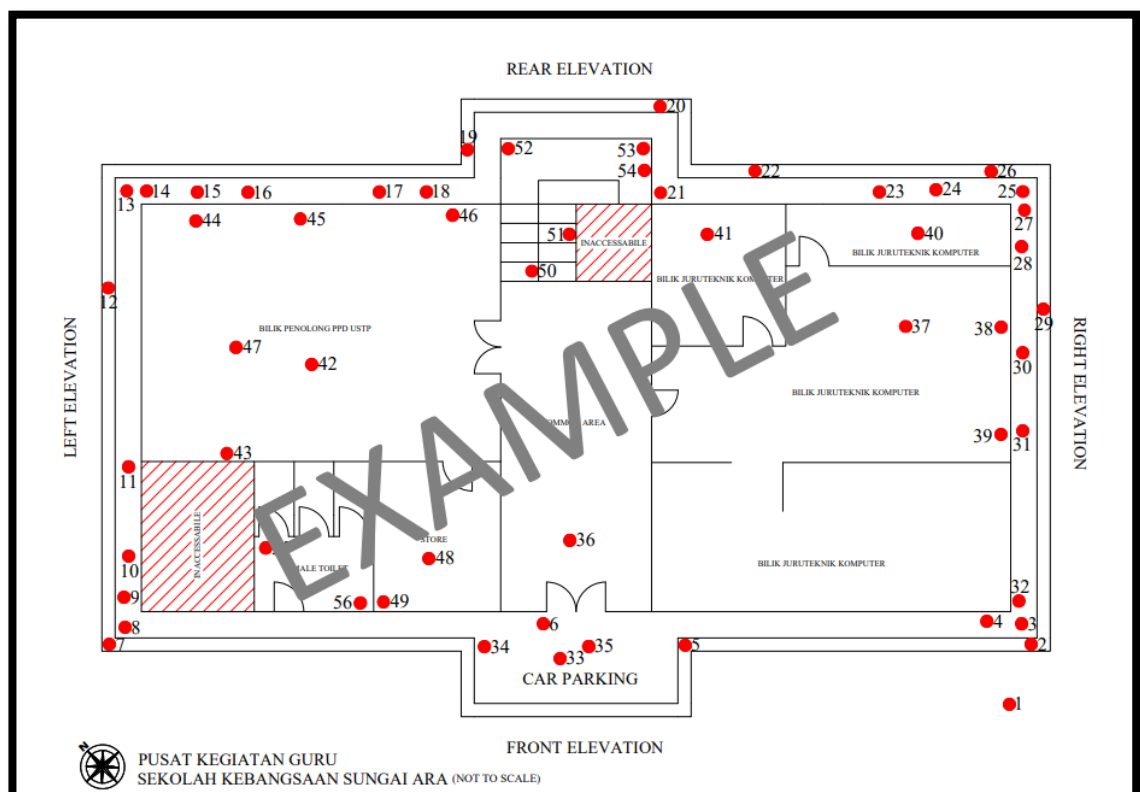


Figure 3.11 Example of AutoCAD indication layout

Photo No.	29	Location	Area	Element
		External	Right elevation	Drain wall
	Crack/Gap	Fine crack line (<1mm width)		
	Water Seepage/ Leakage	-		
	Other Defects	-		
	Remarks	-		


Photo No.	30	Location	Area	Element
		External	Right elevation	Wall
	Crack/Gap	Fine crack line (<1mm width)		
	Water Seepage/ Leakage	-		
	Other Defects	-		
	Remarks	-		

Photo No.	31	Location	Area	Element
		External	Right elevation	Apron
	Crack/Gap	Fine crack line (<1mm width)		
	Water Seepage/ Leakage	-		
	Other Defects	-		
	Remarks	-		

Photo No.	32	Location	Area	Element
		External	Right elevation	Apron
	Crack/Gap	-		
	Water Seepage/ Leakage	-		
	Other Defects	Chipped off cement screed		
	Remarks	-		

Figure 3.12 Example of dilapidation report

SEND DRAFT TO THE CLIENT

The drafted dilapidation report will be submitted to the client after it has been reviewed by the supervisor, and the client will review the report. The client will inform the surveyor if there are any adjustments or additions that need to be made. The report will be sent via email.

SUBMISSION FINAL REPORT

If the client is satisfied with the drafted dilapidation report, it will be printed three sets and binding it. A soft copy of the final report as well as photographs must be saved on CD ROM as shown in figure 3.13 and submitted together with a well-revised final report as shown in figure 3.14. If the client's office is close to the surveyor's, the surveyor will send the report straight to the client. However, if the client's office is far away, the surveyor will send it via courier.



Figure 3.13 Sample of CD Rom cover



Figure 3.14 Dilapidation report ready send to the client

3.3 To identify the existing common defects in a dilapidation survey

In dilapidation survey, a visible defect on the property that has to be inspected is called the existing common defect. The inspection will be carried out on the infrastructure and structural element such as column, beam, wall, floor, soffit slab, fence wall and staircase.

There have several common defects will be found in dilapidation survey such as cracks, separation gap, uneven, chipped off, water stain marks, and spalled.

3.3.1 Crack

Cracks can be found in common areas such as walls, floor, road kerb, road drain, drain, ceilings, coping and slab. There are three types of cracks in the inspection form: fine crack for approximate width less than 1mm, medium crack for width 1mm until 5mm and wide crack for width exceeding 5mm as shown in figure 3.15,3.16 and 3.17.



Figure 3.15 Fine crack line on the coping



Figure 3.16 Width crack line on the apron using crack gauge

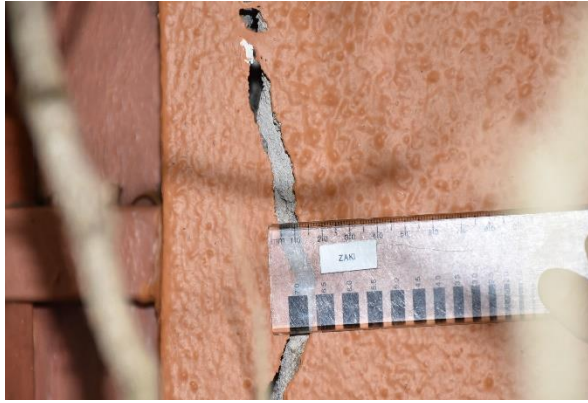


Figure 3.17 Wide crack on the wall using crack gauge

3.3.2 Separation gap

The gap between two structural elements is known as the separation gap. The types of separation gap are shown in the figure 3.18, figure 3.19 and figure 3.20.

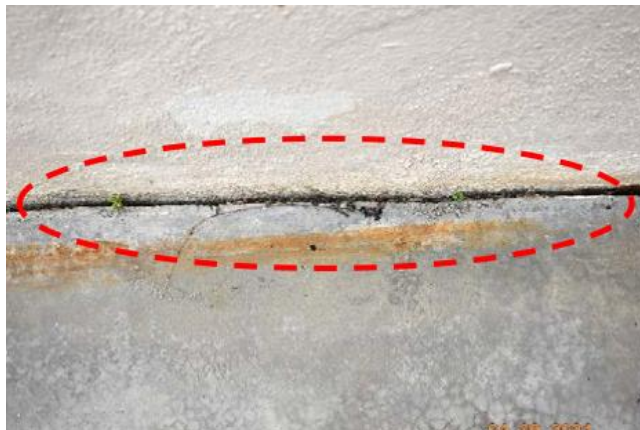


Figure 3.18 separation gap between apron and wall



Figure 3.19 Separation gap between ceiling panel with other ceiling panel.

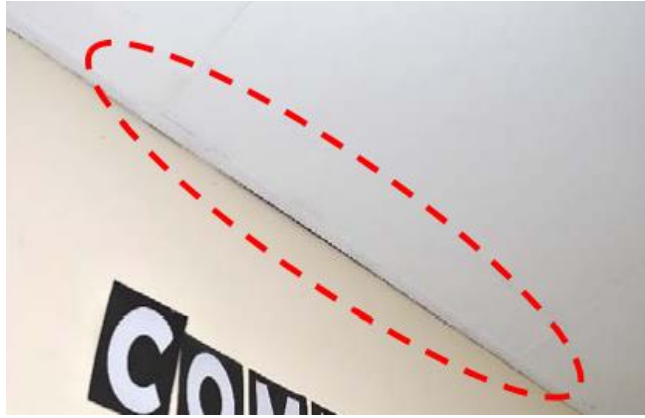


Figure 3.20 Separation gap between wall and ceiling.

3.3.3 Uneven

Uneven means a surface of elements are bumpy and rough. The uneven surface can be found on the road, wall and floor. The examples of uneven surface on the road in dilapidation survey as shown in figure 3.21.



Figure 3.21 Example of uneven surfaces on the road.

3.3.4 Chipped off

There are three types of chipped off in dilapidation such as chipped off cement screed, chipped off plaster and chipped off concrete. For the most part, chipped off cement screed will occur on road kerb and walkway meanwhile chipped off plaster will be seen on wall and ceiling. It is common to find chipped off concrete on concrete structural elements, however it is rarely observed in dilapidation surveys for proposed construction. The examples types of chipped off as shown in figure 3.22 and figure 3.23.



Figure 3.22 Chipped off cement screed on the road drain

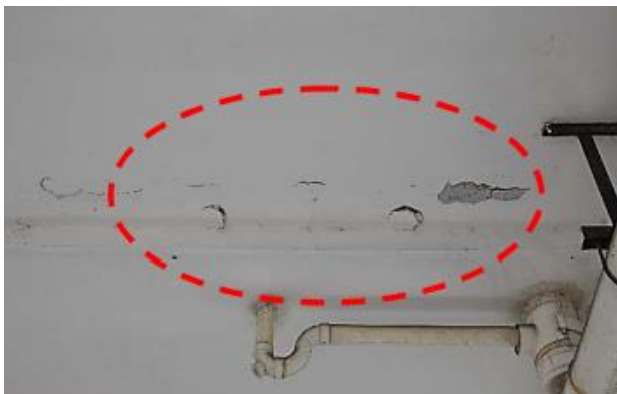


Figure 3.23 Chipped off plaster on the ceiling

3.3.5 Water stain marks

Water stain marks are caused by leakage water. It can be found on the wall, floor, beam and soffit slab but most of the time will be found on ceiling. The examples of water stain marks are shown in the figure 3.24.



Figure 3.24 Water stain marks on the beam

3.3.6 Spalled

There are two types of spalled defects namely spalled concrete and spalled premix. Both of spalled have difference of area where position the defect is located. The spalled concrete defect usually on the ceiling and soffit slab, the example of spalled concrete is shown in figure 3.25. The spalled premix only visible on the road, the example of spalled premix is shown in the figure 3.26.



Figure 3.25 Spalled concrete on the soffit slab

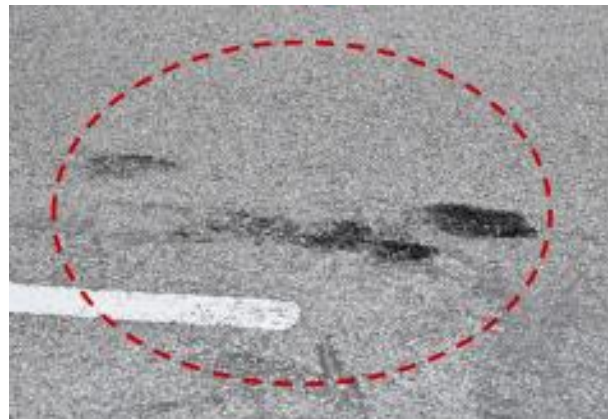


Figure 3.26 Spalled premix on the road surface

3.4 To identify challenges problem and solution during dilapidation survey.

There were various challenges encountered when going to site survey and conducting a dilapidation survey. Firstly, there is lack of manpower because the dilapidation survey normally has two surveyors to manage all of the projects on the site, the work will be slow. Not only that, there is not enough surveyor to send a report and meet client at the same time. The solution that can do is the company should hire more employees to assist the team, as the team requires more surveyors to complete the projects on the site. This is because having an extra staff would help manage the project and improve the quality of work.

The other challenge is safety during inspection on the road owing to the fact that road congestion conditions caused by many vehicles. This is because consultant that taking a defect photo need to cross the road for other side of road, while the other consultant needs to sketch an indication of defect site and hold the measuring wheel. Therefore, it is necessary to wear a safety vest while working especially when do inspection on the road to avoid unintended accidents. The consultant can also ask the client to provide traffic officer to ensure employee safety during inspection on road.

The other problem with going to approach property owner is the awareness from public especially the property owner, which means most property owner lack knowledge about dilapidation survey. For example, the property owner thinks that consultant coming to the property as a scammer not to approach for inspection on the property. So, as the person in charge, the property owner will be given explanation how important to do dilapidation survey before the construction started and bringing a letter of appointment as evidence hired by contractor of the construction. Herewith, it can avoid argument between the contractor and property owner in case anything happens to the property during construction progress.

CHAPTER 4.0

CONCLUSION

In conclusion, this report can be summarised that dilapidation survey is most important work needs to be done in every construction project before the construction begins because it can use as used as reference evidence when the property owner wants to seek compensation for a new defect discovered on the dilapidation work area after construction begins. The dilapidation survey work takes roughly three months to complete, including the transmission of a report to the client and the case study is undertaken in three keys of objective.

The process of dilapidation survey for proposed construction have eight step which are quotation and award, preparation of equipment and letter, approach and set an appointment, inspection, report preparation, send a draft to the client and lastly submit the report. The surveyor will take pictures of existing common defects found in the dilapidation area such as cracks, separation gap, uneven, chipped off, water stain marks, and spalled. For the challenging problem that happen during dilapidation survey work such as lack of manpower, safety during inspection on the road and awareness from public especially the property owner can be solved easily.

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