DEPARTMENT OF BUILDING SURVEYING
FACULTY OF ARCHITECTURE, PLANNING AND SURVEYING
UNIVERSITI TEKNOLOGI MARA
CAWANGAN PERAK
KAMPUS SERI ISKANDAR

BUILDING QUALITY INSPECTION FOR VACANT POSSESSION (COMPLETE)

SYABIL ARISSA BINTI AZIZI
(2015890332)
DIPLOMA IN BUILDING SURVEYING

PRACTICAL TRAINING REPORT
MARCH - JULY 2018

ACKNOWLEDGEMENT

First and foremost, I would like to thanks to Allah S.W.T that ease my path during the whole practical training session from the very first until the end. Plus, I would like to thanks to my family who always give me moral support whenever I am in need and whenever I lost my courage to end my Practical Training session which is also my very first experience to be in the career world of Building Surveying company.

I would also keep my grateful to my supervisor lecturer Madam Intan Bayani for all her guidance, attention, support and understanding during the whole term I was being under her supervision from 1st March 2018 until 29th June 2018. Despite all her personal issues, she did not neglect me and my progress for the practical training report.

Next, I would like express my biggest gratitude especially to the Director of Canaan Building Inspection Sdn. Bhd, Sr. Joshua Kang Wee Leng for willingly accepting me as one of the trainee at the company. It is my pleasure to have and spent my practical training at one of Building Surveying firm as it is my dream to be one of the family of Canaan Building Inspection Sdn. Bhd that offer the scope of work related to Qlassic.

I express my deepest gratitude to Miss Khalilah binti Naim which is my team leader for the opportunity on me to learn more on performing dilapidation survey and building quality inspection. And also, I would not forget all the kindness of the staffs at Canaan Building Inspection Sdn. Bhd for their guidance and help on my scopes of work as a trainee and treat as part of the family of the company.

It is my radiant sentiment to place my best kind of regards and deepest gratitude to the building inspectors, Mr. Shazman Amirul for helping me on the format and propose content for my practical training report. Also, Mr. Mohamed Shahidam bin Fauzi for spending some of his free time to

check the draft of each chapter of my practical training report before I submit to my supervisor for the progress session. And my biggest gratitude to Miss Khalilah binti Naim and Mr. Muhammad Amin bin Mohd Redzuan for all the guidance, information and extra knowledge especially on Building Quality Inspection for Vacant Possession which is my topic for the practical training report.

I perceive this big opportunity as a big milestone in my career development in Building Surveying's company. And I would also recommend to the future practical student who deeply have interest on performing and learn more about dilapidation survey and building quality inspection based on Qlassic to apply here at Canaan Building Inspection Sdn. Bhd.

TABLE OF CONTENT

LIST OF FIGURES

CHAPTER 1 : COMPANY PROFILE

CHAPTER 2 : LITERATURE REVIEW

CHAPTER 3 : CASE STUDY FOR PROPOSED TOPIC

LIST OF TABLES

CHAPTER 1 : COMPANY PROFILE

CHAPTER 2 : LITERATURE REVIEW

CHAPTER 3 : CASE STUDY FOR PROPOSED TOPIC

LIST OF CHART

CHAPTER 3 : CASE STUDY FOR PROPOSED TOPIC

CHAPTER 4 : PROBLEMS AND RECOMMENDATIONS

ABSTRACT

Canaan Building Inspection & Rectification Services has been established in year 2005 and have been upgraded to Canaan Building Inspection Sdn Bhd in year 2013. The company is an independent building surveying company who registered with Institution Surveyors of Malaysia (ISM). Also, it also the registered member of InterNACHI (International Association of Certified Home Inspectors) and Certified CONQUAS Manager by the Building & Construction Authority of Singapore (BCA).

The company also comply with practical experiences in construction quality assurance and **Construction Quality Assessment System (CONQUAS)**, that have been invited by CIDB, Malaysia as the Technical Committee Member in drafting the **Construction Industry Standards (CIS 7: 2006)** in year 2006. Moreover, their professional and expertise once again been recognised by CIDB, Malaysia. The company have been appointed as the Working Group as well as the Technical Committee in preparing the new CIS7:2014 that has been launched by Minister of Works, Malaysia on 30th October 2014.

On 18th February 2009, their efforts and contribution in QLASSIC again has gained the recognition and confidence from CIDB, Malaysia by appointing the company as one of the certified QLASSIC trainers as well as certified QLASSIC Assessors.

The content for the Chapter 2 for my Practical Training Report is on the literature review for the selected topic that I have proposed and consult with my supervisor. We are require to propose a topic for our Practical Training Report which I made up a decision to bring the topic on Building Quality Inspection for Vacant Possession as it is one of the scope of services offered at the company that I am currently interning, Canaan Building Inspection Sdn. Bhd.

In this chapter, I will elaborate more on Building Quality Inspection for Vacant Possession with the usage of 'wh- question' with what is Qlassic, when do we perform the Building Quality Inspection for Vacant Possession, who is qualified to perform the qlassic inspection on the owner property, how much does it cost and how long does it take to perform the Qlassic inspection. This will be elaborate in the literature review which is based on the ***Quality Guidebook for Homeowners, 2017.***

Then, I will focus on the objectives of performing the Qlassic on Building Quality Inspection for Vacant Possession. Plus, I will elaborate the scope of work that is related during the process of performing the Building Quality Inspection for Vacant Possession that is align with the quality standard based on Construction Industry Standard 7 : 2006 (CIS 7). Last but not least, I will insert the assessment checklist based on Quality Guidebook for Homeowners, 2017 that also a used as a guidance and reference while performing the Building Quality Inspection for Vacant Possession.

The content for Chapter 3 of my Practical Training Report is on the case study. We are require to propose a topic for our Practical Training Report which I made up a decision to bring the topic on Qlassic Inspection for Owner Property as it is one of the scope of services offered at the company that I am currently interning, Canaan Building Inspection Sdn. Bhd.

As for my case study, I have decide to elaborate on the Qlassic Inspection for Owner Property at Alam Impian which I attend as the assistant for the Inspection Team leader in charge, Miss Khalilah binti Naim on 27th March 2018 (Tuesday) at 9.30a.m.

In this chapter, I will elaborate in details on the case study that I choose which is on the building background and client, or else owner's profile. Then, I will elaborate further with appropriate photos and function on the tools and equipment used while performing the Qlassic Inspection for owner property.

Last but not least, I will elaborate on the procedure of the Qlassic inspection and the defect analysis on the property with the details of defects listed and sighted during the inspection.

The content for the Chapter 4 for my Practical Training Report is on the problems and recommendations for the selected topic that I have propose and consult with my supervisor.

We are require to state the problems that we are facing based on the topic for our Practical Training Report which I made up a decision to bring the topic on Building Quality Inspection for Vacant Possession as it is one of the scope of services offered at the company that I am currently interning, Canaan Building Inspection Sdn. Bhd.

In this chapter too, I will elaborate on the recommendation for every problems that I have stated while performing the Building Quality Inspection for Vacant Possession.

The content for the Chapter 5 for my Practical Training Report is on the conclusion for the overall lesson that I have learned during my practical session at Canaan Building Inspection Sdn. Bhd.

CHAPTER 1.0

INTRODUCTION

Canaan Building Inspection & Rectification Services has been established in year 2005 and have been upgraded to Canaan Building Inspection Sdn Bhd in year 2013. The company is an independent building surveying company who registered with Institution Surveyors of Malaysia (ISM). Also, it also the registered member of InterNACHI (International Association of Certified Home Inspectors) and Certified CONQUAS Manager by the Building & Construction Authority of Singapore (BCA).

The company also comply with practical experiences in construction quality assurance and **Construction Quality Assessment System (CONQUAS)**, that have been invited by CIDB, Malaysia as the Technical Committee Member in drafting the **Construction Industry Standards (CIS 7: 2006)** in year 2006. Moreover, their professional and expertise once again been recognised by CIDB, Malaysia. The company have been appointed as the Working Group as well as the Technical Committee in preparing the new CIS7:2014 that has been launched by Minister of Works, Malaysia on 30th October 2014.

On 18th February 2009, their efforts and contribution in QLASSIC again has gained the recognition and confidence from CIDB, Malaysia by appointing the company as one of the certified QLASSIC trainers as well as certified QLASSIC Assessors.

1.1 COMPANY BACKGROUND

Figure 1. 1 : Canaan Building Inspection Sdn. Bhd logo

Canaan Building Inspection Sdn. Bhd is an independent Building Surveying company and Certified QLASSIC Consultant who provide a series of construction quality consultation and building inspection services for Property Developers, Contractors, Property Investors as well as Homebuyers.

The number of staff that are currently hire by **Canaan Building Inspection Sdn. Bhd** are 10 staffs which consists of Project Coordinator that will be in charge in all official affairs between the company and clients. Plus, there are also Inspection Team that will performing the inspection on site, preparing the floor plan and building information and the Report Team that will be responsible to prepare the full report on the inspected unit of a building for the clients.

Therefore, the company which is **Canaan Building Inspection Sdn. Bhd** is currently training 4 students which are 3 from UiTM Cawangan Perak, Campus Seri Iskandar and also one from University of Malaya. The trainees were all will be placed under Miss Ling Ung Kiew, the Assistant Admin and Surveyor Report Manager as the supervisor in charge.

Figure 1. 2 : Director of Canaan Building Inspection Sdn. Bhd and working groups with CIDB in drafting the CIS7: 2014

NO.	INFORMATION	DETAILS
1	Company Name	Canaan Building Inspection Sdn. Bhd
2	Director	Sr. Joshua Kang Wee Leng
3	Full Address	B-8-17, Block B, Oasis Square, Jalan PJU 1A/7A, Ara Damansara, 47301 Petaling Jaya, Selangor.
4	Office Number / Fax	03-7831 0925
5	Email	canaanbuildinginspector@gmail.com
6	Website	www.canaanbuildinginspector.com
7	Media	https://www.facebook.com/CanaanBuildingInspection/

Table 1. 1 : Company Data

1.1.1 View of the Building

Figure 1. 3 : View of Ara Damansara, Petaling Jaya

Figure 1. 4 : View of Oasis Damansara, Ara Damansara

Figure 1. 5 : View of Oasis Square's Main Entrance

Figure 1. 6 : View of the Block B, Oasis Square

Figure 1. 7 : Entrance of Canaan Building Inspection office

1.1.2 Adjacent Building

ADJACENT BUILDING DETAILS	
 Figure 1. 8 : View of Sime Darby Plantation Berhad	**Sime Darby Plantation Berhad** ➢ Address : No 2, Jalan PJU 1A/7, Ara Damansara, 47301 Petaling Jaya, Selangor. ➢ Distance from Canaan Building Inspection Sdn. Bhd is (0.5 kilometres)
 Figure 1. 9 : View of Citta Mall	**Citta Mall** ➢ Address : No. 1, Jalan PJU 1A/48, Pusat Perdagangan Dana 1, 47301 Petaling Jaya, Selangor. ➢ Distance from Canaan Building Inspection Sdn. Bhd is (1.6 kilometres)
 Figure 1. 10 : View of Ara Damansara LRT Station	**Ara Damansara LRT Station** ➢ Address : LRT Station Ara Damansara, 47301 Petaling Jaya, Selangor ➢ Distance from Canaan Building Inspection Sdn. Bhd is (2.6 kilometres)
 Figure 1. 11 : View of The Potpourri Residence	**The Potpourri Residence** ➢ Address : No. 2, Jalan PJU 1/4, Ara Damansara, 47301 Petaling Jaya, Selangor. ➢ Distance from Canaan Building Inspection Sdn. Bhd is (1.2 kilometres)

Table 1. 2 : List of adjacent buildings

1.2 VISION, MISSION AND MOTTO

Figure 1. 12 : Inspector Team of Canaan Building Inspection Sdn. Bhd

VISION

"To give the professional work for people and promise to be honest, sincere and dedicate to do work"

MISSION

"To become leader organisation in standard of building quality (QLASSIC) in Malaysia"

MOTTO

"We SPECIALISE in building Quality and would not tolerate any Quality matters that we affect our Quality Service"

1.3 ORGANISATION CHART

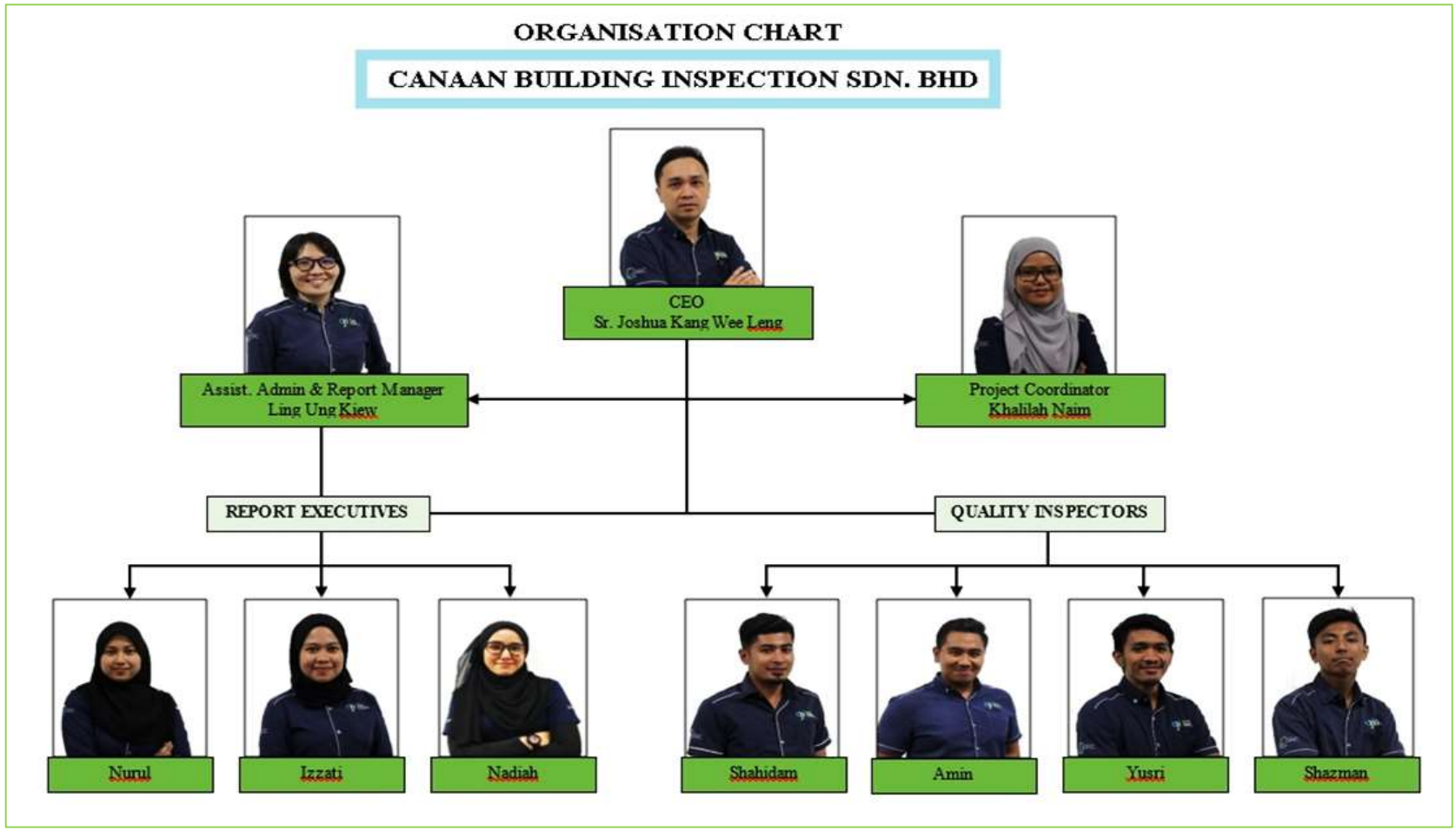


Figure 1. 13 : Organisation Chart

1.4 SCOPE OF SERVICES

The services provided by Canaan Building Inspection and Rectification Services Sdn. Bhd are Awareness and Practical Training, Building Quality Inspection and Assessment, Independent Pre-Qlassic / Conquas Assessment, Process Quality Audit, and Building Condition or Dilapidation Survey.

As for the **Awareness and Practical Training**, the company provide Quality Awareness and Practical Training to educate the government agencies, private property developers, contractors as well as home owner about inspection and quality standard.

In-Process Quality Audit, Canaan Building Inspection and Rectification Services Sdn. Bhd provide general buildings condition survey prior and after construction of a project. Also, provide independent building condition audit for the existing buildings.

As for the scope of **Building Quality Inspection and Assessment**, the company provide 100% building defects or quality inspection on the completed projects for government agencies, private property developers, contractors as well as home buyers.

The **Building Condition / Dilapidation Survey** provided by Canaan Building Inspection and Rectification Services Sdn. Bhd on the general buildings condition survey prior and after construction of a project. Also, the company provide independent building condition audit for the existing buildings.

Last but not least, the company also provide the services on **Independent Pre-Qlassic / Conquas Assessment** for a project or individual unit to evaluate the rating of quality workmanship of a project or building.

1.5 MAPS AND LOCATION

Figure 1. 14 : Key Plan of Malaysia

Figure 1. 15 : Key Plan of Selangor Darul Ehsan

Figure 1. 16 : Key Plan of Petaling Jaya

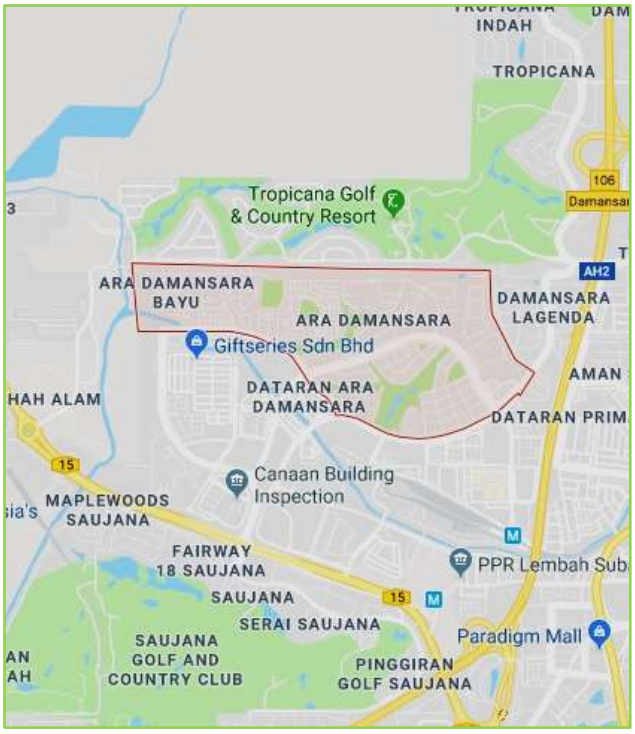


Figure 1. 17 : Key Plan of Ara Damansara

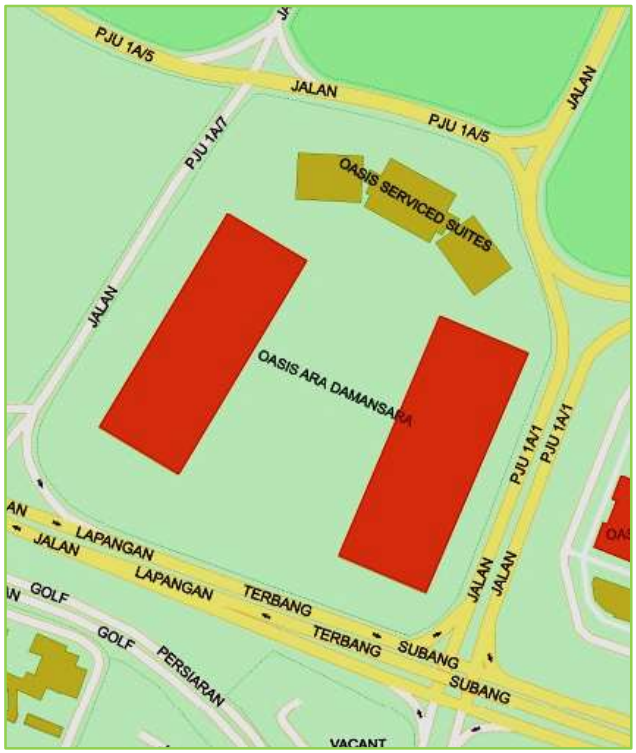


Figure 1. 18: Key Plan of Oasis Square

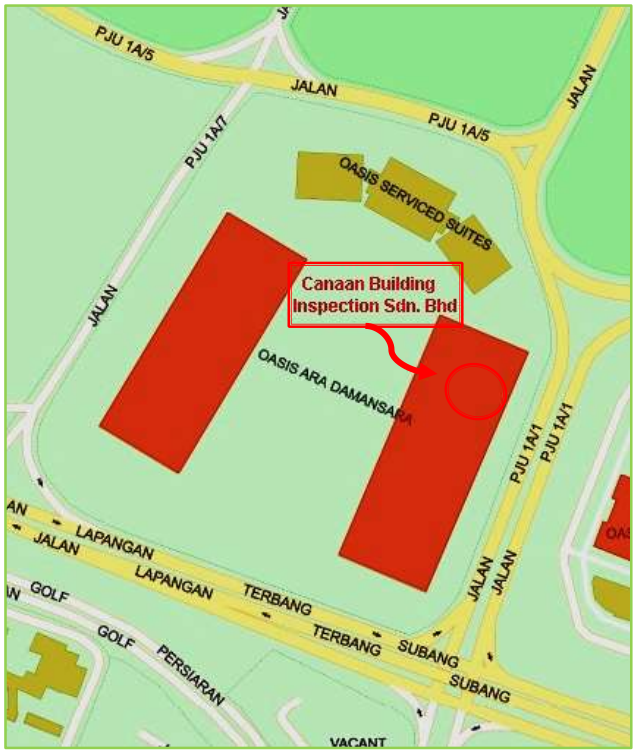


Figure 1. 19 : Location of Canaan Building Inspection office

1.6 TRAINING DESCRIPTION

During my practical training at Canaan Building Inspection Sdn. Bhd, I was placed as the assistant for the Inspector Team which are Muhammad Amin bin Mohd Ariffin, and Khalilah binti Naim as the team leader.

My scope of work during the practical training are assisting the Inspector Team on site, preparing the floor plan which is required to be held in to the Report Team within 3 days after the inspection, and assisting the Inspector Team to prepare the building information for each unit of building that were inspected. Plus, I did manage to learn the report format for Dilapidation Survey Report from Izzati, as the Report Executive of Canaan Building Inspection Sdn. Bhd.

The supervisor that fully in charge on my scope of learning, attendance, and issues is Miss Ling Ung Kiew as the Assistant Admin and Surveyor Report Manager**.**

Therefore, this is the layout plan of the Canaan Building Inspection's office and the position of my seat as the trainee.

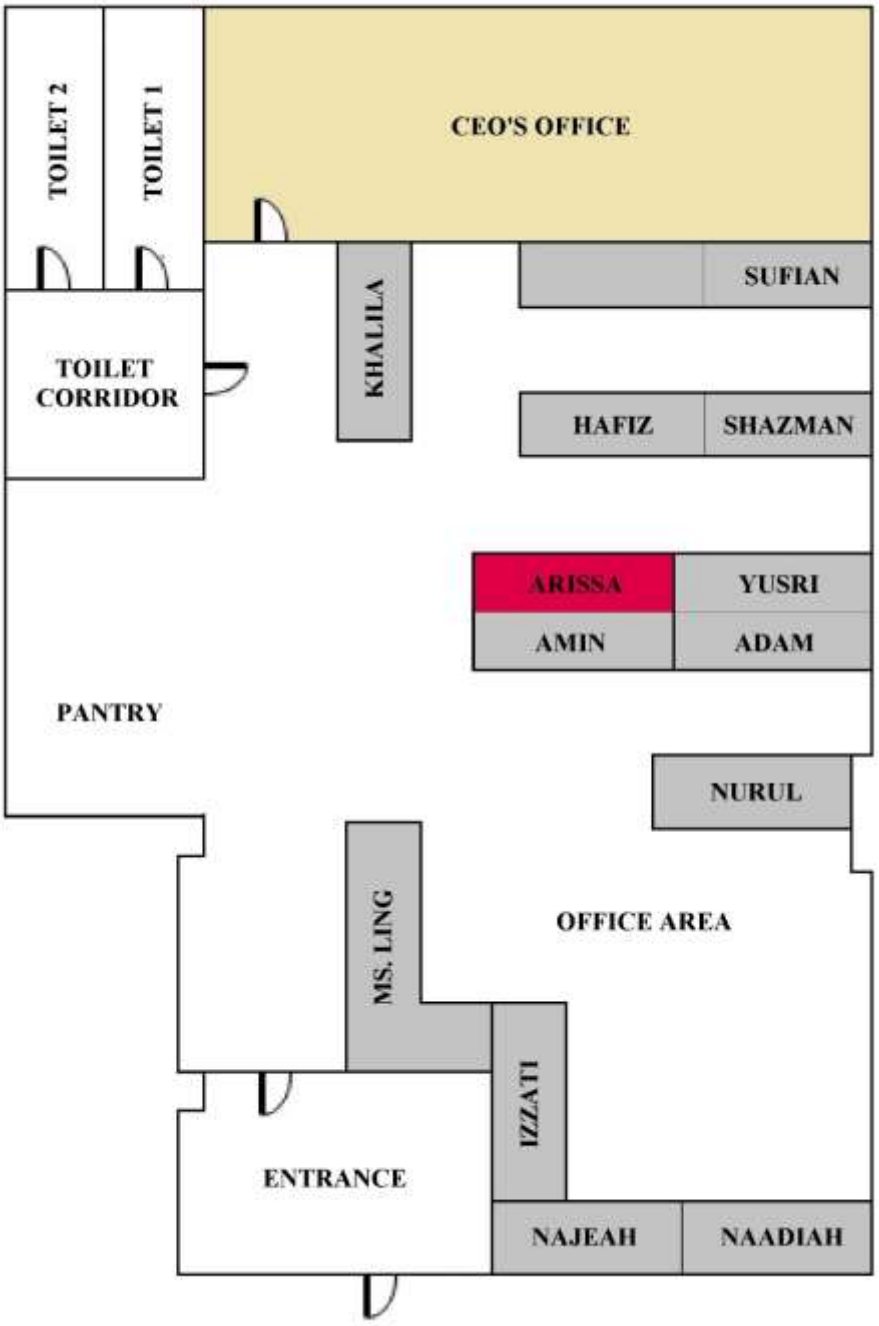


Figure 1. 20 : Layout plan of the office

1.7 COMPLETED AND ON-GOING PROJECT

1.7.1 Completed Projects (2010 – 2017)

PROJECT SUMMARY	
 Figure 1. 21 : Signboard of Sime Darby Property	**Sime Darby Property** ➢ Proposed Development of 196 Units Apartment at 3-Resident, Melawati. ➢ Period : December 2010 – May 2011
 Figure 1. 22 : Landscape view of Sime Darby Property	**Sime Darby Property** ➢ Proposed Development of 28 Blocks, 400 Units Apartment at Ara Hill (Phase 2) at Ara Damansara, Petaling Jaya, Selangor. ➢ Period : January 2011 – June 2011
 Figure 1. 23 : Signboard of Xyratex (M) Sdn. Bhd	**XYRATEX (M) Sdn. Bhd** ➢ Lot 34 and 37, Persiaran Bunga Tanjung 1, Senawang Industrial Park, 70400 Seremban, Negeri Sembilan. ➢ Period : 10th June 2010 – 12th June 2010

PROJECT SUMMARY	
 Figure 1. 24 : Signboard of Loh & Loh Development	**Loh & Loh Development** ➢ Proposed Development of 180 Units Semi-Dees and Bungalow at Idaman Hill, Selayang. ➢ Period : December 2011 – December 2012
 Figure 1. 25 : View of GES Venture	**GES Venture (M) Sdn. Bhd** ➢ Proposed Development of 6 Units of 3 Storey Detached Factories with 1 Storey Mezzanine and 1 Unit of 3 Storey Detached Factories with 1 Storey Mezzanine on Lot PT9905, Jalan Teknologi ¾ Pekan Baru Sungai Buloh, Daerah Petaling, Selangor. ➢ Period : 14th April 2011
 Figure 1. 26 : Front view of SIAB (M) Sdn. Bhd	**SIAB (M) Sdn. Bhd** ➢ Proposed Development of 1 Block 31 Storey Offices with 5 Storey Basement Car Park on Lot PT 3924 (Lot 51888), Jalan Wan Kadir, Taman Tun Dr Ismail, Kuala Lumpur. ➢ Period : 5th March 2010 – 12th March 2010

PROJECT SUMMARY	
 Figure 1. 27 : View of Yee Seng Heights Sdn. Bhd	**Yee Seng Heights Sdn. Bhd** ➢ Proposed Development of 1Unit of 3 Storey Bungalow with Swimming Pool on Lot 37223, Jalan Bayu 7, Bukit Gita Bayu, Serdang, Mukim Kajang, Daerah Hulu Langat, Selangor. ➢ Period : October 2010 – June 2011
 Figure 1. 28 : Signboard of CONQUAS	**Glenmarie Properties Sdn. Bhd** ➢ Proposed Development of 68 Units Bungalows at Glenmarie Garden, Glenmarie, Shah Alam. ➢ Period : July 2011 - 2013
 Figure 1. 29 : View of WCT Construction Sdn. Bhd	**WCT Construction Sdn. Bhd** ➢ Proposed Mixed Commercial Development with Purpose Built Medical Centre and Related Facilities at Coastal Highway Kota Kinabalu, Sabah. ➢ Period : 2012 - 2015

PROJECT SUMMARY	
 Figure 1. 30 : View of Daewoo Engineering & Construction Co	**Daewoo Engineering & Construction Co** ➢ St. Regis Kuala Lumpur ➢ Period : 2013 - 2015
 Figure 1. 31 : View of MMC Gamuda KVMRT (T) Joint Venture	**MMC Gamuda KVMRT (T) Joint Venture** ➢ Project Mass Rapid Transit Lembah Klang : Jajaran Sungai Buloh – Kajang (Pasar Rakyat Lauching Shaft, Escape Shaft, Pasar Rakyat Station, Maluri South Portal and Along Tunnel Alignment). ➢ Period : 2012 - 2015
 Figure 1. 32 : View of IJM	**IJM** ➢ University of Reading Malaysia (UoRM). ➢ Period : 2013 - 2015

PROJECT SUMMARY	
 Figure 1. 33 : View of BCB Berhad	**BCB Berhad** ➢ Concerto North Kiara. ➢ Period : 2014 - 2016
 Figure 1. 34 : View of Keller (M) Sdn. Bhd	**Keller (M) Sdn. Bhd** ➢ Seri Duta 1 Condominium Dilapidation Survey. ➢ Period : 2015
 Figure 1. 35 : View of MMC – Gamuda KVMRT	**MMC – Gamuda KVMRT** ➢ SMART Tunnel Dilapidation Survey. ➢ Period : 2016

PROJECT SUMMARY	
 Figure 1. 36 : View of MMC – Gamuda KVMRT	**MMC – Gamuda KVMRT** ➢ Mural Wall Museum Negara Dilapidation Survey. ➢ Period : 2015
 Figure 1. 37 : View of Hwa Hin Sdn. Bhd	**Hwa Hin Sdn. Bhd** ➢ Proposed Construction and Completion of 43 Nos Ready-Bult Factory (Rbf), 3 Nos Security Checkpoints, Ntp Main Entrance, External Works Within Lot Boundary and Ancillary Works on Part of Lot Ptd 2377, Mukim Tanjung Kupang, Daerah Johor. ➢ Period: 2016
 Figure 1. 38 : View of Sime Darby Berhad	**Sime Darby Berhad** ➢ Dimension Measurement Verification for Serissa Terrace Houses at Denai Alam, Shah Alam, Selangor ➢ Period: 2016
 Figure 1. 39 : View of SIAB (M) Sdn. Bhd	**SIAB (M) Sdn. Bhd** ➢ Kanvas Cyberjaya Pre-QLASSIC Assessment. ➢ Period: 2016

PROJECT SUMMARY	
 Figure 1. 40 : View of Kalsari Jaya Sdn. Bhd	**Kalsari Jaya Sdn. Bhd** ➢ Construction and Completion of Ponderosa Woods Phase 1 & 2, Comprising of 26 Units of 3 Storey Semi-D House Type(C) Including 1 Unit Of Show Unit And 1 Unit Of Mock Up House On Ptd 215903 – Ptd 215920 And Ptd 215935 – Ptd 215942, 18 Units Of 3 Storey With Lower Ground Floor Semi-D ➢ Period: 2016
 Figure 1. 41 : Signboard of Sunway PKNS Sdn. Bhd	**Sunway PKNS Sdn. Bhd** ➢ Building Condition Survey for Sunway Rymbal Hills, Clubhouse. ➢ Period: 2017
 Figure 1. 42 : Front view of Keller (M) Sdn. Bhd	**Keller (M) Sdn. Bhd** ➢ Piling & Pile Cap Works for Proposed Development Phase 2-3 Block Apartment (1512 Unit) on Lot Pt 26890 Jalan Metro Perdanan Barat, Taman Metropolitan Kepong Mukim Batu, Daerah Kuala Lumpur. ➢ Period: 2017

PROJECT SUMMARY	
 Figure 1. 43 : View of KIMCON Builders Sdn. Bhd	**KIMCON Builders Sdn. Bhd** ➢ Proposed Development 11 Unit Shops / Offices, 2 & 2 ½ Tingkat, 18 Unit 3 Storey Terrace Factory and Electric House on Lot 13442, Mukim Batu, Daerah Gombak, Majlis Perbandaran Selayang. ➢ Period: 2017
 Figure 1. 44 : View of Flexis @ One South Soho	**Flexis@One South Soho, Seri Kembangan** ➢ General Building Condition Inspection of One South Soho. ➢ Period: 2017
 Figure 1. 45 : View of MMC Gamuda KVMRT (T) Sdn. Bhd	**MMC Gamuda KVMRT (T) Sdn. Bhd** ➢ Historical Architectural Building Survey Report, Mural Facades at National Museum. ➢ Period: 2017

Table 1. 3 : List of completed project by Canaan Building Inspection Sdn. Bhd

1.7.2 On-Going Projects (2017 – 2018)

PROJECT SUMMARY	
 Figure 1. 46 : Infrastructure of MMC Gamuda KVMRT Sdn. Bhd	**MMC Gamuda KVMRT Sdn. Bhd** ➢ MRT 3 (Underground Package for TU 1, TU2 & TU3) ➢ Period: 2017 – 2018
 Figure 1. 47 : View of BCB Groups of Companies	**BCB Groups of Companies** ➢ Home Tree, Kota Kemuning Evergreen Height, Batu Pahat, Bandar Putra Indah, Batu Pahat, Taman Saujana Kluang, Kluang, Elysia, Nusajaya. ➢ Period: 2016 – 2019
 Figure 1. 48 : View of SCEC Group of Companies	**SCEC Group of Companies** ➢ Proposed Development Condominium at Puteri Harbour, Nusajaya. ➢ Period: 2016 – 2018

PROJECT SUMMARY	
 Figure 1. 49 : View of Gadang CRFG Consortium Sdn. Bhd	**Gadang CRFG Consortium Sdn. Bhd** ➢ The Execution and Completion of Works for Cadangan Penyuraian Trafik Dan Kerja Menaiktaraf Jalan Tun Razak Dari Jalan Langgak Golf Ke Bulatan Kampung Pandan Kuala Lumpur Package 2 ➢ Period: 2018
 Figure 1. 50 : View of Mudajaya Corporation Berhad	**Mudajaya Corporation Berhad** ➢ Construction and Completion of Light Transit Rail Line 3 (LRT3) From Bandar Utama To Johan Setia Package Gs01 – Guideway, Stations, Park and Ride, Anchillary Buildings And Other Associated Works. ➢ Period: 2018

Table 1. 4 : List of on-going project by Canaan Building Inspection Sdn. Bhd

1.8 SUMMARY

Knowingly as a company with Building Surveying background, Canaan Building Inspection Sdn. Bhd is also implement CIS 7 : 2006 while performing the inspection especially the building quality inspection which related to Qlassic. However, as for dilapidation survey inspection, Qlassic is not implemented due to the conformity. The director of Canaan Building Inspection Sdn. Bhd is also a qualified building accessor by Construction Industry Development Board Malaysia (CIDB).

CHAPTER 2.0

LITERATURE REVIEW

Figure 2. 1 : Logo of Qlassic

The content for the Chapter 2 for my Practical Training Report is on the literature review for the selected topic that I have propose and consult with my supervisor. We are require to propose a topic for our Practical Training Report which I made up a decision to bring the topic on Building Quality Inspection for Vacant Possession as it is one of the scope of services offered at the company that I am currently interning, Canaan Building Inspection Sdn. Bhd.

In this chapter, I will elaborate more on Building Quality Inspection for Vacant Possession with the usage of 'wh- question' with what is Qlassic, when do we perform the Building Quality Inspection for Vacant Possession, who is qualified to perform the qlassic inspection on the owner property, how much does it cost and how long does it take to perform the Qlassic inspection. This will be elaborate in the literature review which is based on the ***Quality Guidebook for Homeowners, 2017.***

Then, I will focus on the objectives of performing the Qlassic on Building Quality Inspection for Vacant Possession. Plus, I will elaborate the scope of work that is related during the process of performing the Building Quality Inspection for Vacant Possession that is align with the quality standard based on Construction Industry Standard 7 : 2006 (CIS 7). Last but not least, I will insert the assessment checklist based on Quality Guidebook for Homeowners, 2017 that also a used as a guidance and reference while performing the Building Quality Inspection for Vacant Possession.

2.1 LITERATURE REVIEW ON BUILDING QUALITY INSPECTION FOR VACANT POSSESSION

QLASSIC is the acronym for Quality Assessment System for Building in Construction Work. This quality assessment work for the building in construction work has been launched by Construction Industry Development Board Malaysia (CIDB) on 2006.

Quality Assessment System for Building in Construction Work (Qlassic) is performed based on the construction quality standard that comply and compliance with Construction Industry Standard, CIS 7 : 2006, Quality Assessment System for Building Construction Work.

However, the Quality Assessment System for Building in Construction Work (Qlassic) does not implemented on the materials, design and aesthetical value of the property.

As for the Building Quality Inspection for Vacant Possession, it is a process that should be carry out when they have taken possession of the **newly completed property**. The Qlassic Assessment is perform after Vacant Possession of your property from the developer/contractor. The DLP is stated in the Sales & Purchase Agreement (SPA) and in most common residential development the DLP is set as 24 months from the date of Vacant Possession.

It is strongly advised to carry out the inspection or assessment prior to any renovation works to prevent unnecessary disputes over defects after renovation. It is a process to safeguard the interests and rights as new homeowners. It is advisable to make the assessments on the new property before the owner move in or start any renovation works to prevent from any difficulties for the claims.

For the moment, CIDB does not carry out QLASSIC on individual properties. However, owner of the property can contact independent assessors to carry out the assessment for them. Upon completion but before the handover of keys to purchaser/client, CIDB will get their assessors to carry out the assessment if the developer had put in an application to carry out QLASSIC. At the moment, QLASSIC is not mandatory and is carried out by developers on a voluntary basis.

For the assessment or general inspection, it costs around a few hundred ringgit to one thousand depending on the size, type of building and location. However, the assessment can be perform by the owner of the property himself with good guidance without too much trouble. Although hiring an inspection inspector will cost you, you can be rest assured a professional will do a thorough job for job, especially if you are time constrained.

As the process for the assessment, it may take unfix time and period, depends on how thorough and meticulous the inspector or the assessor are and how much help they get. It may take between a few hours to some days.

As for the claims on any defects occur on the new property, the qualified person (Building Surveyor) hired by the owner will provide the legal description and report for the use of the claim. This will be hand by the owner of the property to the developer or contractor involved as for any claim on the property.

Thus, if the developer or contractor refuse to take responsible on the defects occur, the case can be dragged to the court as it is assessed by the qualified person. The owner may also refer to the Tribunal for House buyer Claims, which is under the Ministry of Urban Wellbeing, Housing and Local Government.

Source : Quality Guidebook for Homeowners, 2017)

2.2 OBJECTIVES OF BUILDING QUALITY INSPECTION FOR VACANT POSSESSION

Quality Assessment System for Building in Construction Work (Qlassic) need to be acknowledge by the homeowner to earn the satisfaction on the quality of the house after the buying process.

The homeowner must acknowledge their legal right to ensure they received the best quality of work and finishing of the house by the developers and contractors itself. Thus, it is rightful for the house owner to claim for rectification works for any defects occurs especially during the Defect Liability Period (DLP) after the Vacant Possession.

The Quality Assessment System for Building in Construction Work (Qlassic) is important as the benchmark the level of quality of construction industry in Malaysia. As prohibited, the process of construction must legally comply to the Construction Industry Standard, CIS 7 : 2006, Quality Assessment System for Building Construction Work.

Then, Quality Assessment System for Building in Construction Work (Qlassic) is performed to ensure the achievement of the contractors in Malaysia based on the quality of work. When the quality assessment is perform, the owner's right will be guaranteed as they can claim for the rectification works for the best quality of property they own.

Quality Assessment System for Building in Construction Work (Qlassic) also launched by Construction Industry Development Board Malaysia (CIDB) as the standard to standardise the quality of construction work. It is a positive way to evaluate the performance of contractors based on their quality of workmanship.

2.3 SCOPE OF WORK FOR BUILDING QUALITY INSPECTION FOR VACANT POSSESSION

Basically there are 7 elements to be assess through visual inspection without any destructive test during the Building Quality Inspection for Vacant Possession which are **Floor, Wall, Ceiling, Door, Window, Fixtures and Basic Mechanical and Electrical Fitting.**

Therefore, it will be easier to carry out the assessment by following the CIS 7, so that the assessor will be able to concentrate on the items that deserve most attention. They must always start the assessment by location which is from the entrance to the end part of the floor plan, likewise followed by upper floors in case of a multi-level property.

An effective way to assess internal finishes is by using the 6+1 method. There are commonly 6 internal finishes within a functional room for the Internal Architectural Work Assessment which are floor, wall, ceiling, door, window and fixture. In addition to these 6 internal finishes within a functional room, the assessor must also assess the basic mechanical and electrical fittings.

Align with the scope of work, the assessment does not cover on the material, design and aesthetics of the property. However, it may state on the owner's comment.

2.4 QUALITY STANDARD FOR BUILDING QUALITY INSPECTION FOR VACANT POSSESSION BASED ON CIS 7 : 2006

Item	Element	Standards	Tolerance	Assessment Tool
I.	**FLOORS**			
A.	**General Requirements**	1) Finishing		
		• No stain marks		Visual
		• Consistent colour tone		Visual
		2) Alignment & Evenness		
		• Evenness of surface	= 3 mm per 1.2 m	Spirit level and steel rule
		• Falls in wet areas should be in right direction		Water or Spirit level
		• For staircases, the variance in lengths of treads and risers must not exceed 5 mm from dimensions specified in the approved drawings		Steel Measuring Tape or Steel rule
		3) Crack and damage		
		• No visible damage/defects		Visual
		4) Hollowness/Delamination		
		• No hollow sound when tapped with a hard object		Tapping rod
		• No sign of delamination		Visual
		5) Jointing		
		• Consistent skirting thickness and no visible gap between wall & skirting		Visual
		• Edge to be straight and aligned	= 3 mm per 1.2 m	Spirit level and steel rule
B.	**Screed Finishes**	1) Finishing		
		• Surface should not be unduly rough or patchy		Visual
		• No permanent foreign material visually detected		Visual

Figure 2. 2 : Quality standard for floor based on CIS 7 : 2006

Item	Element	Standards	Tolerance	Assessment Tool
	FLOORS			
C.	**Tiled Floor**	1) Finishes		
		• Joints are aligned with skirting and wall tiles		Visual and Calliper
		• Joints are aligned between tiles and consistent size		Visual
		• Consistent and neat marking		Visual
		• Lippage between two tiles	= 1 mm	Calliper
D.	**Timber Floor**	No warpage		Visual
		• Timber strips to rest firmly on joists or screeds		Visual
		• No visible gaps between timber strips		Visual
		Edges of the floor to properly sealed		Visual
E.	**Carpet**	Finishes 1)		
		• Surface should be stretched and even	= 3 mm per 1.2 m	Spirit level and steel rule
		• Joints should not be visible		Visual
		• All edges should be properly anchored		Visual
F.	**Special Floor Finish**	1) Finishes		
		• Finished texture and colour to be uniform		Visual
		• Follow general requirement where applicable		
G.	**Raised Floor**	1) Finishes		
		• No loose floor panels or rocking		Visual
		• No protrusion/ potential of tripping over floor panels		Visual

Figure 2. 3 : Quality standard for floor based on CIS 7 : 2006

Item	Element	Standards	Tolerance	Assessment Tool
II.	**INTERNAL WALLS**			
A.	**General Requirements**	1) Finishing		
		• No stain mark		Visual
		• Consistent colour tone and good paintwork		Visual
		• No rough/patchy surface		Visual
		2) Crack and Damage		
		• No visible damage/defect		Visual
		3) Hollowness/Delamination		
		• No hollow sound when tapped with a hard object		Tapping rod
		• No sign of delamination		Visual
		4) Alignment and Evenness		
		• Evenness of surface	=3 mm per 1.2 m	Spirit level and steel rule
		• Verticality of wall	=3 mm per 1.2 m	Spirit level and steel rule
		• Walls meet at right angle	= 4 mm over 300 mm	L-square and steel rule
		• Edge to be straight and aligned	=3 mm per 1.2 m	Alignment laser and steel measuring tape
B.	**Plaster Finishes**	1) Finishes		
		• No visual crack		Visual
C.	**Tiled Finishes**	1) Finishes		
		• Joint are aligned between tiles and consistent size.		Alignment laser and Calliper
		• Consistent and neat marking.		Visual
		• Lippage between 2 tiles should not be more than 1 mm.		Spirit level and Steel rule.

Figure 2. 4 : Quality standard for internal wall based on CIS 7 : 2006

Item	Element	Standards	Tolerance	Assessment Tool
	INTERNAL WALLS			
D.	**Painting**	1) Finishes Surfaces are evenly painted • Good opacity, no patchiness resulted from touch up work • Surface should be free from peeling, blister, chalkiness (No discolouration and fading)		 Visual Visual Visual and physical
E.	**Wall Paper**	• Wall paper should be stretched and even surface • Joints should not be visible • Edges should be neatly laid and finished • Proper anchoring at all edges	= 3 mm per 1.2 m	Visual and spirit level Visual Visual Visual
F.	**Wood/Timber Panels**	• Timber panels should rest firmly on joists or screed • No gaps can be detected between panels • Edges should be properly aligned and sealed • Surface should be smoothly finished • Cracks and warpage should not be detected		Visual and physical Visual Visual Visual
G.	**Cladding**	• Proper anchorage for panels. • Joints aligned and with consistent joint size. • Sealant material compatible with cladding. • Consistent spacing and within allowable tolerance. • No sign of corrosion	 = 3 mm per 1.2 m	Visual Visual Visual Spirit level and steel rule Visual
H.	**Glass Blocks**	• Consistent and neat marking. • Joint should be even. • Glass blocks should be properly aligned.	 = 3 mm per 1.2 m	Visual Visual Spirit level and steel rule
J.	**Architectural Coating**	• Finished texture and colour to be uniform.		Visual

Figure 2. 5 : Quality standard for internal wall based on CIS 7 : 2006

Item	Element	Standards	Tolerance	Assessment Tool
III.		**CEILING**		
A.	**General Requirements**	1) Finishing		Visual
		• No stain marks		Visual
		• Consistent colour tone		Visual
		• No patchy surface		Visual
		2) Alignment and evenness		
		• Surface should be smooth, even, not wavy		
		• Straightness of corners		Visual
		3) Crack and damages		Visual
		• No visible damage e.g. spalling, leaks, cracks, etc		Visual
		4) Roughness		Visual
		• No rough surface		Visual
		5) Jointing		Visual
		• Consistent, aligned and neat		Visual
B.	**Plaster/ Skim Coat/ Boarded Ceiling**	No pin holes and with no trowel marks		Visual
		• Formwork joints are grounded smooth		Visual
		• Paintwork with good opacity and with no brush marks		Visual
		• Access door joints should be neat and have consistent width		Visual
		• No gap between wall and ceiling		Visual
		• No sign of corrosion		Visual
C.	**False Ceiling/ Grid System**	• Alignment of rails should be visually straight		Visual
		• Chipped/cracked surfaces or corners should not be detected		Visual
		• Gap between ceiling and wall should not be detected		Visual
		• Panels should not warp and laid neatly into grids		Visual
		• No sign of corrosion		Visual

Figure 2. 6 : Quality standard for ceiling based on CIS 7 : 2006

Item	Element	Standards	Tolerance	Assessment Tool
IV	DOOR & WINDOW & FIXTURES (INTERNAL)			
A.	DOOR	1) Joints & Gap		
		• Consistent gap between bottom of door leaf and finished floor	= 5 mm	Calliper
		• No visible gaps between door frame and wall		Visual
		• Neat joints		Visual
		• Consistent gap between door leaf and frame	= 5 mm	Calliper
		2) Alignment & Evenness • Parallel to with the walls		Visual
		• Door frame to be plumb and square		Spirit level and L-square or laser beam
		• Double leaf doors to flush with each other		Visual
		• Door frame and leaf to flush		Visual
		• Door leaf and frame corners maintained at right angles		L=Square
		3) Material & Damages		
		• No stain marks and any visible damage		Visual
		• No sags, warps on door leaf		Visual
		• Door joints and nail holes filled up, properly sanded		Visual
		• Glazing clean and evenly sealed with gasket		Visual
		• No sign of corrosion		Visual
		• Good paintwork (including top and bottom of door leaf)		Visual
		4) Functionality		
		• Ease in opening and closing		Physical
		• No squeaky sound during opening and closing of the door	tested 5 times continuously	Physical
		• Lockset should be functional	tested 20 times continuously	Physical

Figure 2. 7 : Quality standard for door, window and fixtures based on CIS 7 : 2006

Item	Element	Standards	Tolerance	Assessment Tool
	DOOR & WINDOW & FIXTURES (INTERNAL)			
		5) Accessories Defects		
		• Accessories with good fit and no stains		Visual
		• No sign of corrosion		Visual
		• No missing or defective accessories		Visual
		6) For timber frame, no additional timber strip added for site adjustment should be detected		Visual
B.	WINDOW	1) Joints & Gap		Visual
		• Consistent gap between window leaf and frame	= 5 mm	Calliper
		• No visible gap between window frame and wall		Visual
		• Neat joint between window frame and wall internally and externally		Visual
		2) Alignment & Evenness		Visual
		• Parallel with wall opening		Visual
		• Window frame to be plumb and square		Spirit level and L-square or alignment laser
		• Window leaf and frame corner maintained at right angle	= 4 mm per 300 mm	L-square and steel rule
		3) Material & Damages		
		• No stain mark & visible damage / defect		Visual
		• Louvered window with glass panels of correct length.		Visual
		• Glazing clean and evenly sealed with putty or gasket for aluminium windows		Visual
		• No sign of corrosion		Visual
		• Good paintwork		Visual

Figure 2. 8 : Quality standard for door, window and fixtures based on CIS 7 : 2006

Item	Element	Standards	Tolerance	Assessment Tool
	DOOR & WINDOW & FIXTURES (INTERNAL)			
C.	FIXTURES (INTERNAL)	4) Functionality		
		• Ease of opening and closing		Physical
		• No squeaky sound during opening and closing of the window	tested 5 times continuously	Physical
		5) Accessories defects		
		• Lock sets with good fit and aligned		Visual
		• No sign of corrosion		Visual
		• No missing or defective accessories		Visual
		* Internal fixtures such as wardrobe, kitchen cabinet, vanity top, bathtub, water closet, shower screen, railings, basin, etc.		
i.	General Requirements	1) Joint & Gap		
		• Consistent joint width & neat joint		Visual
		• No visible gap		Visual
		2) Alignment & Evenness		
		• Level and in alignment		Visual
		3) Material & Damage		
		• No stain mark		Visual
		• No damage/defect		Visual
		• Consistent in colour tone		Visual
		4) Functionality		
		• Function, secured and safe		Visual and physical
		5) Accessory defect		Visual
		• No missing accessory		
		• No sign of corrosion		Visual
		• No damages/defect		Visual
		• Verticality of balusters	= 3 mm per 1.2 m	Spirit level and steel rule
		• Railings securely anchored		Physical
		• Welding at joint must be grounded or flush		Visual

Figure 2. 9 : Quality standard for door, window and fixtures based on CIS 7 : 2006

Item	Element	Standards	Tolerance	Assessment Tool
VI	EXTERNAL WALLS			
A.	General Requirements	1) Finishing		
		• No stain mark		Visual
		• Consistent colour tone and good paintwork		Visual
		2) Crack and Damage		
		• No visible damage/ defect		Visual
		3) Roughness		
		• Not wavy and not patchy		Visual
B.	Plaster Finishes	• As per *General Requirement* above		
C.	Tiled Finish	• Joint are aligned between tiles, and consistent size		Alignment laser and Calliper
		• Consistent and neat marking.		Visual
		• Lippage between 2 tiles should not be more than 1mm		Calliper
D.	Cladding/ Curtain Walls	• Gaps around openings to be properly sealed		Visual
		• Joint of regular widths as specified		Visual
		• Evenness of surface, no dent or scratches		Visual
		• Sealant material compatible with cladding		Visual
		• No sign of corrosion		Visual
E.	Facing Brickwork	• 10 mm joint with marking		Steel rule or Calliper
		• Weep holes are provided as specified		Visual
		• No efflorescence		Visual

Figure 2. 10 : Quality standard for external walls based on CIS 7 : 2006

Item	Element	Standards	Tolerance	Assessment Tool
VI	EXTERNAL WALLS			
A.	**General Requirements**	1) Finishing		
		• No stain mark		Visual
		• Consistent colour tone and good paintwork		Visual
		2) Crack and Damage		
		• No visible damage/ defect		Visual
		3) Roughness		
		• Not wavy and not patchy		Visual
B.	**Plaster Finishes**	• As per *General Requirement* above		
C.	**Tiled Finish**	• Joint are aligned between tiles, and consistent size		Alignment laser and Calliper
		• Consistent and neat marking.		Visual
		• Lippage between 2 tiles should not be more than 1mm		Calliper
D.	**Cladding/ Curtain Walls**	• Gaps around openings to be properly sealed		Visual
		• Joint of regular widths as specified		Visual
		• Evenness of surface, no dent or scratches		Visual
		• Sealant material compatible with cladding		Visual
		• No sign of corrosion		Visual
E.	**Facing Brickwork**	• 10 mm joint with marking		Steel rule or Calliper
		• Weep holes are provided as specified		Visual
		• No efflorescence		Visual

Figure 2. 11 : Quality standard for external walls based on CIS 7 : 2006

Item	Element	Standards	Tolerance	Assessment Tool
	EXTERNAL WALLS			
F.	**Architectural Coating**	• Finished texture and colour to be uniform		Visual
		• No paint drips and other stains		Visual
G.	**Painting**			
		• Surfaces are evenly painted; no patchiness due to touch up work		Visual
		• Good opacity, no discolouration and fading		Visual
		• Surface should be free from peeling, blister and chalkiness		Visual and physical
H.	**Fixtures (External)** External fixtures such as signage, emergency lightings, railings, unit nos plate, lift fittings, letter box, lightings, etc.	General Requirements		
		1) Joints and gaps		
		• Consistent joint width & neat joint.		Visual
		• No visible gap		Visual
		2) Alignment and evenness		
		• Even level, align and consistent		Visual
		3) Material and damages		
		• No stain mark		Visual
		• No visible damage / defect		Visual
		• Consistent in colour tone		Visual
		4) Functionality		
		• Function, secured and safe		Visual and physical
		5) Accessory Defect		
		• No missing accessory		Visual
		• No sign of corrosion		Visual
		• No visible damage / defect		Visual

Figure 2. 12 : Quality standard for external walls based on CIS 7 : 2006

Item	Element	Standards	Tolerance	Assessment Tool
VII	APRONS AND PERIMETER DRAINS			
A.	General Requirements	1) No stain marks and visible damages/ defects		Visual
		2) Finishes must be even, level, align and consistent		Spirit level/ steel rule/ measuring tape/ alignment laser
		3) Consistent joints width and neat		Visual
		4) Paintworks with good opacity, no patchiness and brush marks		Visual
		5) Fixtures installed must be safe, secured and functional		Physical and Visual
		6) Standards defined under Part 1: internal finishes, Part 2: roof and Part 3: External wall shall apply for similar items		
B.	Perimeter drains and aprons	1) Drain		
		• Free flowing and no ponding of water		Water or visual
		2) Drain Cover		
		• Level and do not warp or rock		Visual and physical
		• Gap between drain covers	5–10 mm wide	Calliper or measuring tape
		• Gap between sides of drain	5–10 mm wide	Calliper or measuring tape
		• Drain grating properly painted		Visual
		3) Apron		
		• No visible cracks		Visual
		• No water ponding		Visual
		• Bitumen joints with neat edges and sufficient length		Visual

Figure 2. 13 : Quality standard for aprons and perimeter drains based on CIS 7 : 2006

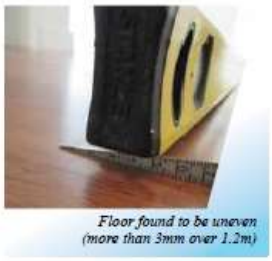
Item	Element	Standards	Tolerance	Assessment Tool
	BASIC M&E FITTINGS			
		• Plumb <10 mm/storey height		Plumb bob and measuring tape
		• Brackets firmly secured & joints properly sealed & marked		Visual
		• If painted, no drippings & with good opacity		Visual
		• Pipes properly support, bent without distortion, kink and damage		Visual
		• Sufficient clearance between installed pipes and building surface for accessibility		Visual
iii	Fittings	• Firmly secured & joints properly sealed & marked		Physical and Visual
		• No leakage at joints		Visual
		• No chipping or cracks		Visual
		• No paint drops or mortar droppings		Visual
		• Fittings in working condition		Physical and Visual
		• Accessible for maintenance		Visual
		• No sediments / particles found in water collected at terminal water fittings (remove aerator & showerhead)		Visual
		• All sensors covers properly sealed against water seepage		Visual
C.	**M&E Fittings**	• e.g. power mark, telephone mark, air-con diffuser, fan coil unit, lighting, smoke alarm, sprinkler heads, CATV/CCTV camera, etc.		
i	Installation	• Fittings must be aligned		Measuring tape
		• No stains		Visual

Figure 2. 14 : Quality standard for basic mechanical and electrical fitting based on CIS 7 : 2006

Item	Element	Standards	Tolerance	Assessment Tool
		BASIC M&E FITTINGS		
		• Neat patch-up for marking/ penetration		Visual
		• Heights of switch and marks should be consistent		Measuring tape
		• Switch can properly function	On and off for 20 times nonstop.	Physical
		• No visible gaps between switch and marks and wall		Visual
		• Brightness of lights		Brightness meter
ii	Safety	• No exposed wiring within reach		Visual
iii	Damages	• No visible damage		Visual

Figure 2. 15 : Quality standard for basic mechanical and electrical fitting based on CIS 7 : 2006

2.5 CHECKLIST FOR BUILDING QUALITY INSPECTION FOR VACANT POSSESSION BASED ON QUALITY GUIDEBOOK FOR HOMEOWNER

ASSESSMENT CHECKLIST (FLOOR)	
   Figure 2. 16 : Defects on floor	**Finishing** ➢ No stain marks on the floor finishing. ➢ Consistent colour tone. ➢ No unduly patches on the floor finishing. **Alignment and Evenness** ➢ Floor surface to be even and shall be equal or not more than 3mm over 1.20m. ➢ Gradient at the wet areas should be in right direction. ➢ Variance in staircase lengths of treads and risers must not exceed 5mm from dimension specified. ➢ Carpet surface should be stretched firm and even, and no visible joint should be seen. **Cracks and Damages** ➢ No visible damages/defects should be seen on the floor (e.g., chipping, broken tiles, cracked tiles, etc). **Hollowness and Delamination** ➢ No hollow sound when tapped with hard object/tapping rod. ➢ No sign of delamination (e.g., carpet tiles peeling off).

ASSESSMENT CHECKLIST (FLOOR)	
 Scratches - damages on the flooring  Chipping at the floor tiling  Floor found to be uneven (more than 3mm over 1.2m) Figure 2. 17 : Defects on floor continuous	**Jointing** ➢ Jointing between floor finishes must be consistent, neat and aligned. ➢ Thickness of the skirting must be consistent and no visible gaps between and skirting. ➢ No holes, over grout, under grout and stains on the jointing. ➢ No visible gaps between timber strips. ➢ Carpet surface should be stretched firm and even and no visible joint should be seen. ➢ Lippage between 2 tiles should not be more than 1mm. ➢ No stain marks on wall. ➢ Consistent colour tone and good paintwork with no paint drips and brush marks. ➢ Good opacity, no rough/patchy surface from touch-up.

Table 2. 1 : Checklist assessment for floor based on Quality Guidebook for Homeowner

ASSESSMENT CHECKLIST (WALL)	
   Figure 2. 18 : Defects on wall	**Finishing** ➢ No stain marks on the wall and consistent colour tone and good paintwork with no paint drips and brush mark. ➢ Good opacity, no rough/patchy surface from touch-up work. **Alignment and Evenness** ➢ Wall to be even with equal or not more than 3mm over 1.20m. ➢ Walls meet at the right angle with equal or not more than 4mm over 300mm. ➢ Vertically of wall should be equal or not more than 3mm over 1.20m. **Cracks and Damages** ➢ No visible damages/defects should be seen on the floor such as cracks, chipping, and peeling off should be seen on wall. **Hollowness and Delamination** ➢ No hollow sound when tapped with hard object/tapping rod and no sign of delamination, wallpaper peeling off. **Jointing** ➢ Jointing between wall tiles must be consistent, neat and aligned. Edges of walls to be straight, aligned and consistent. ➢ No holes, over grout, under grout and stains on the jointing. ➢ Lippage between 2 tiles should not be more than 1mm.

Table 2. 2 : Checklist assessment for wall based on Quality Guidebook for Homeowner

ASSESSMENT CHECKLIST (CEILING)	
  Figure 2. 19 : Defects on ceiling	**Finishing** ➢ No stain marks with consistent colour tone. ➢ Paintwork with good opacity and brush marks. **Alignment and Evenness** ➢ Ceiling surface to be smooth, even, not wavy and not sagging. ➢ Edges of the ceiling to be straight and aligned. ➢ Ceiling manhole to be flush. **Cracks and Damages** ➢ No visible damages/defects should be seen on the floor such as cracks, chipping, spalling and leakage mark should be seen on ceiling. ➢ Ceiling tee not to be dented or crooked. **Roughness and Patchiness** ➢ Surface to be smooth with no patchy surface due to touch-up works. **Jointing** ➢ Jointing must be consistent, aligned and neat. ➢ Jointing surround ceiling manhole to be neat and consistent. ➢ Consistent or no visible gap between ceiling and wall.

Table 2. 3 : Checklist assessment for ceiling based on Quality Guidebook for Homeowner

ASSESSMENT CHECKLIST (DOOR)

ASSESSMENT CHECKLIST (DOOR)	
 Inconsistent joint between door frame and door leaf  Screw at the door hinge found to be missing  Visible gap at the edge of the door architrave Figure 2. 20 : Defects on door	**Joints and Gaps** ➢ No visible gap between door and wall. ➢ Consistent gap between door leaf and frame and the gap shall not be more than 5mm. ➢ Consistent and no visible gaps for joints at door leaf and frame. **Alignment and Evenness** ➢ Aligned and level with wall. ➢ Door to be flush with each other and door frame. ➢ Door leaf and frame corners maintained at right angles. ➢ No ratting sound when the door is closed. **Materials and Damages** ➢ No stain marks and any visible damages including paint drip, brush marks and such. ➢ No sags, warp and sign of corrosion on door leaf and frame. ➢ Door joints and nail holes filled up, sanded with good paintwork. ➢ Good paintwork including top and bottom of door leaf. ➢ Glazing clean and evenly sealed with gasket. ➢ Consistent colour tone. **Functionality** ➢ Ease in opening, closing and locking. ➢ No squeaky sound during opening and closing of the door. ➢ Locket should be functional.

ASSESSMENT CHECKLIST (DOOR)	
	Accessories Defects ➢ Accessories with good fit and no stains. ➢ No sign of corrosion or missing or defective accessories. ➢ Screws levelled and flushed. Screws should be fastened properly. ➢ For timber frame, no additional timber strip added for site adjustment should be detected.

Table 2. 4 : Checklist assessment for door based on Quality Guidebook for Homeowner

ASSESSMENT CHECKLIST (WINDOW)	
   Figure 2. 21 : Defects on window	**Joints and Gaps** ➢ No visible gap between window and wall. ➢ Neat joints between window frame and wall internally and externally. Consistent and no visible gaps for joints at window leaf and frame. **Alignment and Evenness** ➢ Aligned and level with wall openings. ➢ Window leaf and frame corners maintained at right angles. **Materials and Damages** ➢ No stain marks and any visible damages including paint drip, brush marks and such. ➢ Louvered window with glass panels of correct length. ➢ Good paintwork/coating with no patchy tough up mark. No sign of corrosion. Glazing clean and evenly sealed with putty or gasket for aluminium windows. **Functionality** ➢ Ease in opening, closing and locking. ➢ No squeaky sound during opening and closing of the window. No sign of rain water seepage. **Accessories Defects** ➢ No sign of corrosion or missing or defective accessories. Screws levelled and flushed. Screws should be fastened properly.

Table 2. 5 : Checklist assessment for window based on Quality Guidebook for Homeowner

ASSESSMENT CHECKLIST (FIXTURE)	
 *Screw at shower screen found to be missing*  *Paint stains found on WC*  *Visible gap around the internal fixture (soap holder)* Figure 2. 22 : Defects on fixture	**Joints and Gaps** ➢ Neat and consistent joints surrounding the fixture. ➢ Welding joints need to be grounded and flushed. **Alignment and Evenness** ➢ Level and aligned. **Materials and Damages** ➢ No stain marks and any visible damages should be detected at fixture. ➢ Colour to be consistent and uniformed. **Functionality** ➢ To be securely fixed, functional and safe. **Accessories Defects** ➢ Accessories with good fit and no stains and no visible damages. ➢ No sign of corrosion or missing or defective accessories.

Table 2. 6 : Checklist assessment for fixture based on Quality Guidebook for Homeowner

ASSESSMENT CHECKLIST (BASIC M&E FITTING)	
 *Visible gap sighted at the jointing of the shower mixer*  *Misalignment of the lighting*  *Gap around the M&E fitting* Figure 2. 23 : Defects on basic M&E fittings	**Joints and Gaps** ➢ Neat and consistent joints surrounding the M&E Fittings. ➢ No visible gaps. ➢ Joints properly sealed and marked. **Alignment and Evenness** ➢ Level and aligned. **Materials and Damages** ➢ No stain marks and any visible damages should be detected at fitting. ➢ Colour to be consistent and uniformed. ➢ No chipping or cracks or any visible paint stain or mortar drippings. **Functionality** ➢ To be securely fixed, functional and safe. ➢ No leakage at joints. **Accessories Defects** ➢ Accessories with good fit and no stains and no visible damages. ➢ No sign of corrosion or missing or defective accessories.

Table 2. 7 : Checklist assessment for basic mechanical and electrical fitting based on Quality Guidebook for Homeowner

2.6 SUMMARY

Building quality inspection for vacant possession is concluded from the implementation of Quality Assessment System in Construction (Qlassic) that related to Construction Industry Standard CIS 7 : 2006. However, the element that are being assess are only floor, wall, ceiling, door, window, fixtures and basic mechanical and electrical fitting. Thus, the inspector also implement the guideline and the checklist from the Quality Guidebook for Homeowner.

CHAPTER 3.0

CASE STUDY FOR PROPOSED TOPIC

Figure 3. 1 : Overall view of properties at Alam Impian

The content for Chapter 3 of my Practical Training Report is on the case study. We are require to propose a topic for our Practical Training Report which I made up a decision to bring the topic on Building Quality Inspection for Vacant Possession as it is one of the scope of services offered at the company that I am currently interning, Canaan Building Inspection Sdn. Bhd.

As for my case study, I have decide to elaborate on the Building Quality Inspection for Vacant Possession at Alam Impian that grouped in Category A (landed, semi-detached, terrace and town house) in the list of building type for assessment which I attend as the assistant for the Inspection Team leader in charge, Miss Khalilah binti Naim on 27th March 2018 (Tuesday) at 9.30a.m.

In this chapter, I will elaborate in details on the case study that I choose which is on the building background and client. Then, I will elaborate further with appropriate photos and function on the tools and equipment used while performing the Building Quality Inspection for Vacant Possession.

Last but not least, I will elaborate on the procedure of the Qlassic inspection and the defect analysis on the property with the details of defects listed and sighted during the inspection.

3.1 INTRODUCTION TO CASE STUDY OF THE BUILDING QUALITY INSPECTION FOR VACANT POSSESSION

Figure 3. 2 : Cover photo of the property for case study

The case study for my Practical Final Report is a double storey terrace house of No. 21, Jalan Panglima Awang 35/104, TTDI Alam Impian, Seksyen 35, 40470 Shah Alam, Selangor. The owner of the property as the client for the Quality Building Inspection for Vacant Possession is Mr. Ahmad Badrulshah Bin Halimi with the address as same as above.

The quality inspection is being done by Khalilah and Arissa on 27th March 2018 from 10.00a.m until 2.40p.m with the weather recorded as cloudy and rainy. The quality inspection is recorded as first inspection performed on the property.

According to the interview with the owner of the property, he have received the key of the house since the end of 2017. However, due to some personal restriction, he only request to perform the Quality Building Inspection for Vacant Possession on the new property, which is the Defect Liability Period left with 12 months.

3.2 TOOLS AND EQUIPMENT USED DURING BUILDING QUALITY INSPECTION FOR VACANT POSSESSION

TOOLS AND EQUIPMENT USED FOR INSPECTION	
 Figure 3. 3 : Copies of floor plan	**Copies of Floor Plan** ➢ As the reference for the assessor to do the assessment, from one space to another space. ➢ To indicate any visible defects during the assessment. ➢ However, the assessor must ensure that each details on the floor plan is exact and as same as the real unit.
 Figure 3. 4 : Pen	**Pen** ➢ To jot down on the checklist of assessment. ➢ To indicate any visible defects on the copies of floor plan during the assessment.
 Figure 3. 5 : DSLR Camera	**DSLR Camera** ➢ To record the photos and video during the assessment. ➢ As the reference for the assessor to tally with the report and checklist.

TOOLS AND EQUIPMENT USED FOR INSPECTION	
 Figure 3. 6 : Sticker	**Sticker** ➢ To mark any visible defects during the assessment. ➢ As the reference for the assessor to indicate on the floor plan and to jot down in the checklist. ➢ As the reference for the homeowner on the defects visible at the property.
 Figure 3. 7 : Tapping road	**Tapping Rod** ➢ To assess the quality of workmanship by checking the hollowness on the floor and wall.
 Figure 3. 8 : Spirit level 600mm	**Spirit Level (600mm)** ➢ To assess the lippage between 2 tiles with the tolerance should not be more than 1mm.

TOOLS AND EQUIPMENT USED FOR INSPECTION	
 Figure 3. 9 : Spirit level 1200mm	**Spirit Level (1200mm)** ➢ To assess the evenness of floor with the tolerance equal or not more than 3mm over 1.20m. ➢ To assess the evenness of wall with the tolerance equal or not more than 3mm over 1.20m.
 Figure 3. 10 : L-Square 200mm x 300mm	**L-Square (200mm x 300mm)** ➢ To assess the right angle of wall with the tolerance equal or not more than 4mm over 300mm.
 Figure 3. 11 : Steel Gauge (0-15mm)	**Steel Gauge (0-15mm)** ➢ To assess the gap / distance from door to door frame.

TOOLS AND EQUIPMENT USED FOR INSPECTION	
 Figure 3. 12 : Steel Wedge	**Steel Wedge** ➢ To assess the evenness of floor with the tolerance equal or not more than 3mm over 1.20m. ➢ To assess the evenness of wall with the tolerance equal or not more than 3mm over 1.20m. ➢ To assess the right angle of wall with the tolerance equal or not more than 4mm over 300mm. ➢ To assess the lippage between 2 tiles with the tolerance should not be more than 1mm.
 Figure 3. 13 : Angle mirror	**Angle Mirror** ➢ To assess the quality of paintwork including top and bottom of door leaf.
 Figure 3. 14 : Infrared camera	**Infrared Camera** ➢ To assess any damp spot on the element of wall and ceiling.

Table 3. 1 : Tools and equipment used for the quality inspection

3.3 PROCEDURE OF BUILDING QUALITY INSPECTION FOR VACANT POSSESSION

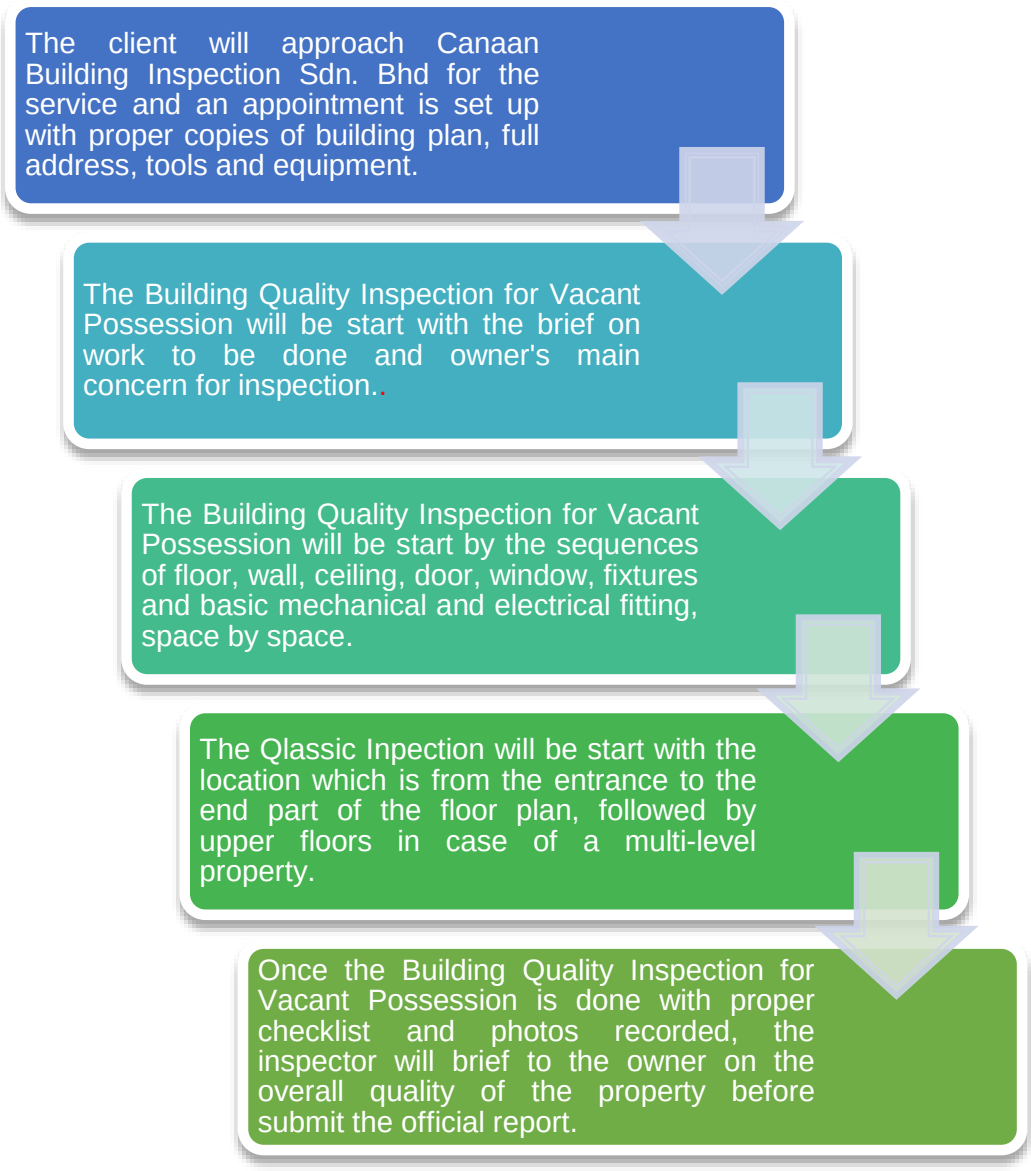


Chart 3. 1 : Procedure of Building Quality Inspection for Vacant Possession

3.4 DEFECT ANALYSIS ON THE CASE STUDY

No	Areas	No of Defects
1	Living Hall	13
2	Dining Hall	16
3	Guest Room	16
4	Bath 5	13
5	Store 2	14
6	Wet Kitchen	12
7	Bath 6	9
8	Dry Kitchen	12
9	Store 1	10
10	ST 1 Leading from Ground Floor to First Floor	14
11	Master Bedroom	15
12	Changing Area	13
13	Bath 1	14
14	Lanai	5
15	Bedroom 2	15
16	Bath 3	10
17	Bedroom 3	23
18	Bath 4	10
19	ST 2 Leading from First Floor to Second Floor	13
20	Family Area	16
21	Bath 2	6
22	Terrace	10
23	External works	38
Total		317

Table 3. 2 : Distribution of defects sighted during inspection

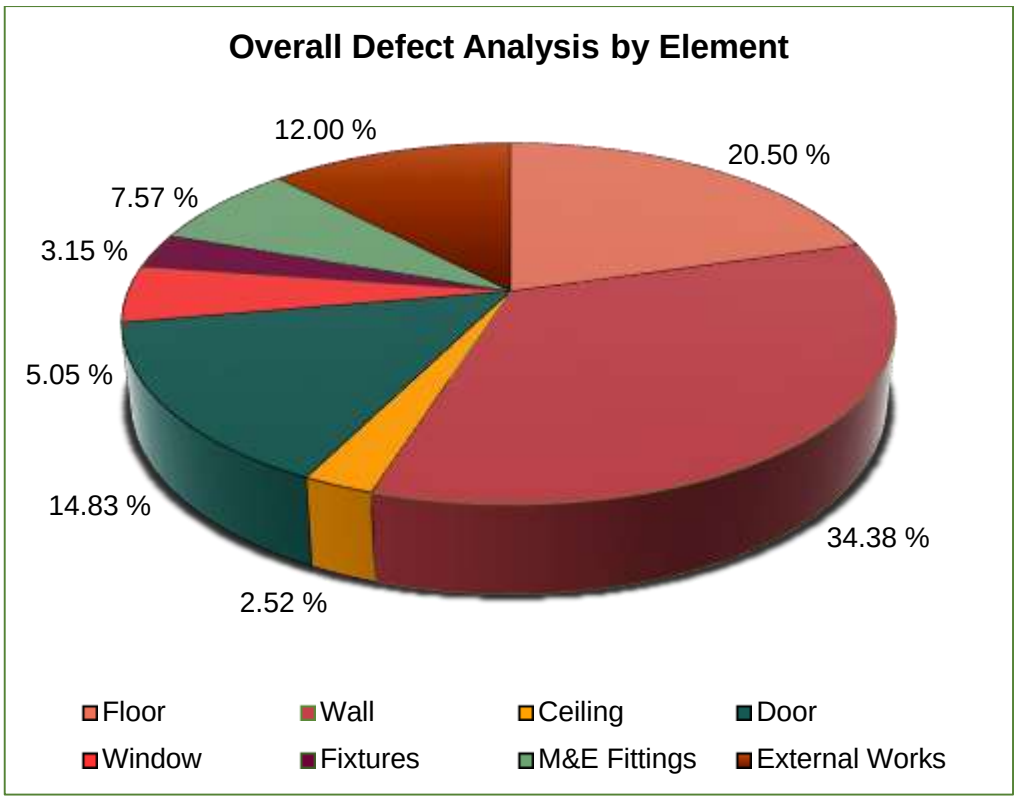


Chart 3. 2 : Overall Defect Analysis on the Property

Overall defect analysis above shown the highest defect sighted on the property is found on the element of wall with the percentage of 34.38 %. The type of defects sighted, which is referred to the CIS 7 : 2006, are the the evenness of wall with the tolerance more than 3mm over 1.20m and the right angle of wall with the tolerance more than 4mm over 300mm. Besides, there are visible cracks, brush marks, paint dripping, chipping, hollowness, patchy and rough surface found on wall finishes.

3.4.1 SUMMARY OF DEFECTS BASED ON AREA

Defects Summary		
No	Defects Description	Total
1	**<u>Living Hall</u>** a) Floor tiles found to be hollow. b) Skirting tiles found to be hollow. c) Floor tiles jointing found to be rough. d) Wall squareness found to be misaligned and exceeded the tolerance of 4mm over 300mm (approximately 10.5mm). e) Wall squareness found to be misaligned and exceeded the tolerance of 4mm over 300mm (approximately 13.0mm). f) Cracks found on wall finishes. g) Rubber gasket at glass wall panel found to be not installed properly. h) Scratches found on wall finishes. i) Inconsistent gap sighted at ceiling manhole jointing. j) Silicone at door jointing didn't fill up properly. k) Jointing around the sliding door frame found to be rough and untidy. l) Gap sighted at switch jointing. m) Power point button found to be stiff in operation.	**13**

Defects Summary

No	Defects Description	Total
2	**<u>Dining Hall</u>** a) Floor tiles found to be hollow. b) Floor tiles jointing found to be rough. c) Gap sighted at floor tiles jointing. d) Gap sighted at skirting tiles jointing. e) Jointing on the top of skirting found to be rough. f) Size of floor tiles jointing found to be inconsistent. g) Paint dripping found on wall finishes. h) Brush mark found on wall finishes. i) Wall found to be uneven and exceeded the tolerance of 3mm over 1.2m (approximately 8.0mm). j) Chippings found on wall finishes. k) Cracks found on wall finishes. l) Scratches found on wall finishes. m) Wall jointing found to be cracked. n) Jointing around the door frame found to be rough and untidy. o) Silicone at sliding door jointing found to be excessive. p) Gap sighted at switch buttons.	**16**
3	**<u>Guest Room</u>** a) Gap sighted between architrave and skirting tiles. b) Paint dripping found on wall finishes. c) Stain marks found on wall finishes. d) Brush mark found on wall finishes. e) Wall squareness found to be misaligned and	**16**

Defects Summary

No	Defects Description	Total
	exceeded the tolerance of 4mm over 300mm (more than 15.0mm). f) Chippings found on wall finishes. g) Cracks found on wall finishes. h) Jointing around the door frame found to be rough and untidy. i) Door frame found to be dented. j) Patchiness found on door panel. k) Gap sighted at window frame jointing. l) Jointing around the window frame found to be rough and untidy. m) Paint stains found on window frame. n) Window handles found to be loosened. o) Switch found to be misaligned. p) Power point button found to be malfunctioned.	
4	**Bath 5** a) Floor tiles jointing found to be rough. b) Floor tiles grouting found to be incomplete. c) Size of wall tiles jointing found to be inconsistent. d) Inconsistent gap sighted at ceiling manhole jointing. e) Jointing around the door frame found to be rough and untidy. f) Inconsistent gap sighted between door panel and door frame. g) Patchiness found on door panel. h) Door hinge found to be rusty. i) Door stopper found to be rusty. j) Jointing around the window frame found to	**13**

Defects Summary

No	Defects Description	Total
	be rough and untidy. k) Gap sighted at wash basin jointing. l) Floor trap cover found to be dented. m) Water cistern found to be not installed properly.	
5	**Store 2** a) Floor finishing found to be rough. b) Floor found to be cracked. c) Floor jointing found to be rough. d) Paint dripping found on wall finishes. e) Wall squareness found to be misaligned and exceeded the tolerance of 4mm over 300mm (approximately 14.5mm). f) Wall squareness found to be misaligned and exceeded the tolerance of 4mm over 300mm (approximately 13.5mm). g) Wall squareness found to be misaligned and exceeded the tolerance of 4mm over 300mm (more than 15.0mm). h) Chippings found on wall finishes. i) Cracks found on wall finishes. j) Wall jointing found to be cracked. k) Inconsistent gap sighted at ceiling manhole jointing. l) Door frame finishing found to be rough. m) Damages found on door frame. n) Gap sighted at power point jointing.	**14**
6	**Wet Kitchen** a) Floor tiles jointing found to be stained or different colour.	**12**

Defects Summary

No	Defects Description	Total
	b) Patchiness found on wall finishes. c) Brush mark found on wall finishes. d) Wall tiles found to be hollow. e) Wall jointing found to be rough. f) Size of wall tiles jointing found to be inconsistent. g) Damages found on door panel. h) Gap sighted at window frame jointing. i) Kitchen sink found to be dented. j) Kitchen sink found to be rusty. k) Jointing around the power point found to be rough and untidy. l) Switch found to be overpainted.	
7	**Bath 6** a) Pointing sighted at floor tiles jointing. b) Floor tiles grouting found to be incomplete. c) Wall tiles jointing found to be incomplete. d) Inconsistent gap sighted at ceiling manhole jointing. e) Door found to be stiff in operation. f) Door stopper found to be rusty. g) Door hinge found to be rusty. h) Gap sighted at soap holder jointing. i) Silicone at wash basin jointing found to be rough.	**9**
8	**Dry Kitchen** a) Gap sighted at the bottom of skirting tiles. b) Floor tiles found to be hollow. c) Jointing of skirting tiles found to be rough. d) Paint dripping found on wall finishes. e) Brush mark found on wall finishes. f) Wall squareness found to be misaligned and	**12**

Defects Summary

No	Defects Description	Total
	exceeded the tolerance of 4mm over 300mm (approximately 13.9mm). g) Chippings found on wall finishes. h) Cracks found on wall finishes. i) Wall found to be hollow. j) Wall jointing found to be cracked. k) Gap sighted at switch jointing. l) Power point cover found to be overpainted.	
9	**Store 1** a) Floor found to be cracked. b) Floor jointing found to be rough. c) Roughness found on wall finishes. d) Chippings found on wall finishes. e) Cracks found on wall finishes. f) Paint peeling off found on wall finishes. g) Roughness found on ceiling finishes. h) Door frame jointing and door frame finishing found to be rough. i) Door frame found to be dented. j) Door lockset housing plate found to be scratched.	**10**
10	**ST1-Staircase 1 leading from Ground Floor to First Floor** a) Staircase riser finishing found to be rough. b) Paint dripping sighted on staircase riser. c) Skim coat at staircase edges found to be peeled off. d) Scratches found on staircase riser. e) Staircase riser found to be hollow. f) Staircase landing jointing found to be rough. g) Gap sighted at staircase jointing.	**14**

Defects Summary

No	Defects Description	Total
	h) Roughness found on wall finishes. i) Paint dripping found on wall finishes. j) Brush mark found on wall finishes. k) Wall squareness found to be misaligned and exceeded the tolerance of 4mm over 300mm (approximately 10.5mm). l) Cracks found on wall finishes. m) Wall found to be hollow. n) Scratches found on railing finishes.	
11	**Master Bedroom** a) Gap sighted at timber skirting. b) Jointing of timber skirting found to be rough. c) Paint dripping found on wall finishes. d) Wall squareness found to be misaligned and exceeded the tolerance of 4mm over 300mm (approximately 14.8mm). e) Wall squareness found to be misaligned and exceeded the tolerance of 4mm over 300mm (more than 15.0mm). f) Wall found to be uneven and exceeded the tolerance of 3mm over 1.2m (approximately 7.7mm). g) Chippings found on wall finishes. h) Cracks found on wall finishes. i) Wall found to be hollow. j) Jointing around the door frame found to be rough and untidy. k) Door panel found to be misaligned. l) Scratches found on door handle. m) Gap sighted at power point jointing. n) Jointing around the switch found to be rough	**15**

Defects Summary

No	Defects Description	Total
	and untidy. o) Power point button found to be stiff in operation.	
12	**Changing Area** a) Timber skirting found to be misaligned. b) Gap sighted at timber skirting jointing. c) Roughness found on wall finishes. d) Paint dripping found on wall finishes. e) Wall squareness found to be misaligned and exceeded the tolerance of 4mm over 300mm (approximately 13.0mm). f) Wall squareness found to be misaligned and exceeded the tolerance of 4mm over 300mm (approximately 13.5mm). g) Wall squareness found to be misaligned and exceeded the tolerance of 4mm over 300mm (approximately 12.5mm). h) Wall squareness found to be misaligned and exceeded the tolerance of 4mm over 300mm (more than 15.0mm). i) Wall found to be uneven and exceeded the tolerance of 3mm over 1.2m (approximately 7.0mm). j) Wall found to be uneven and exceeded the tolerance of 3mm over 1.2m (approximately 6.8mm). k) Chippings found on wall finishes. l) Wall jointing found to be cracked. m) Gap sighted at switch jointing.	**13**

Defects Summary

No	Defects Description	Total
13	**Bath 1** a) Floor tiles found to be chipped. b) Floor tiles jointing found to be rough. c) Pointing sighted at floor tiles jointing. d) Floor tiles grouting found to be incomplete. e) Wall tiles found to be hollow. f) Wall tiles jointing found to be rough. g) Size of wall tiles jointing found to be inconsistent. h) Pointing sighted at wall tiles jointing. i) Roughness found on ceiling finishes. j) Water marks and water dampness found on ceiling finishes. k) Pointing sighted at ceiling jointing. l) Jointing around the door frame found to be rough and untidy. m) Door frame found to be dented. n) Door hinge found to be rusty.	**14**
14	**Lanai** a) Pointing sighted at floor tiles jointing. b) Water marks and water dampness found on wall finishes. c) Cracks found on wall finishes. d) Sliding door outer frame found to be dented. e) Scratches sighted at sliding door outer frame.	**5**
15	**Bedroom 2** a) Gap sighted between timber flooring panels. b) Jointing on the top of skirting found to be rough. c) Brush mark found on wall finishes.	**15**

Defects Summary

No	Defects Description	Total
	d) Wall squareness found to be misaligned and exceeded the tolerance of 4mm over 300mm (approximately 12.5mm). e) Wall found to be wavy. f) Chippings found on wall finishes. g) Cracks found on wall finishes. h) Wall jointing found to be cracked. i) Jointing around the door frame found to be rough and untidy. j) Inconsistent gap sighted between door panel and door frame. k) Jointing around the window frame found to be rough and untidy. l) Window frame found to be dented. m) Window hinge found to be rusty. n) Gap sighted at switch jointing. o) Switch found to be misaligned.	
16	**Bath 3** a) Pointing sighted at floor tiles jointing. b) Floor tiles grouting found to be incomplete. c) Wall tiles found to be hollow. d) Size of wall tiles jointing found to be inconsistent. e) Wall tiles jointing found to be incomplete. f) Jointing around the door frame found to be rough and untidy. g) Door panel found to be misaligned (cannot close-up firmly). h) Door hinge found to be rusty. i) Door stopper found to be rusty. j) Lower water pressure found at wash basin	**10**

Defects Summary

No	Defects Description	Total
	water tap.	
17	**Bedroom 3** a) Scratches found on timber flooring. b) Gap sighted at the bottom of timber skirting. c) Roughness found on wall finishes. d) Patchiness found on wall finishes. e) Paint dripping found on wall finishes. f) Brush mark found on wall finishes. g) Wall squareness found to be misaligned and exceeded the tolerance of 4mm over 300mm (approximately 10.5mm). h) Wall squareness found to be misaligned and exceeded the tolerance of 4mm over 300mm (more than 15.0mm). i) Wall found to be wavy. j) Chippings found on wall finishes. k) Cracks found on wall finishes. l) Blistering found on wall finishes. m) Scratches found on wall finishes. n) Jointing around the door frame found to be rough and untidy. o) Size of door frame found to be inconsistent. p) Door found to be stiff in operation. q) Door hinge found to be overpainted. r) Jointing around the window frame found to be rough and untidy. s) Scratches found on window frame. t) Squeaky sound heard in operating the window hinge. u) Window hinge found to be rusty. v) Gap sighted at switch jointing.	**23**

Defects Summary

No	Defects Description	Total
18	**Bath 4** a) Floor tiles jointing found to be rough. b) Floor tiles grouting found to be incomplete. c) Stain marks found on wall tiles. d) Wall tiles jointing found to be rough. e) Size of wall tiles jointing found to be inconsistent. f) Jointing around the door frame found to be rough and untidy. g) Door stopper found to be rusty. h) Toilet paper holder found to be slanted or misaligned. i) Jointing around the bidet found to be rough and untidy. j) Floor trap cover found to be dented (unable to close-up).	**10**
19	**ST2-Staircase 2 leading from First Floor to Second Floor** a) Staircase riser finishing found to be rough. b) Stain marks found on staircase tread. c) Staircase riser found to be chipped. d) Skim coat at staircase edges found to be peeled off. e) Staircase landing jointing found to be rough. f) Gap sighted at the bottom of timber skirting. g) Roughness found on wall finishes. h) Wall squareness found to be misaligned and exceeded the tolerance of 4mm over 300mm (approximately 11.5mm). i) Wall squareness found to be misaligned and exceeded the tolerance of 4mm over	**13**

Defects Summary

No	Defects Description	Total
	300mm (approximately 13.0mm). j) Cracks found on wall finishes. k) Wall found to be hollow. l) Wall jointing found to be cracked. m) Gap sighted at staircase railing jointing.	
20	**Family Area** a) Stain water mark found on timber flooring. b) Damages found on timber skirting. c) Scratches found on timber flooring. d) Timber flooring jointing found to be rough. e) Gap sighted between timber flooring panels. f) Gap sighted at the bottom of timber skirting. g) Paint dripping found on wall finishes. h) Brush mark found on wall finishes. i) Chippings found on wall finishes. j) Cracks found on wall finishes. k) Blistering found on wall finishes. l) Paint peeling off found on wall finishes. m) Jointing around the window frame found to be rough and untidy. n) Window hinge found to be loosened. o) Screw found to be missing from the window hinge. p) Gap sighted at switch jointing.	**16**
21	**Bath 2** a) Pointing sighted at floor tiles jointing. b) Floor tiles grouting found to be incomplete. c) Jointing around the door frame found to be rough and untidy. d) Door stopper found to be rusty. e) Wash basin found to be misaligned.	**6**

Defects Summary

No	Defects Description	Total
	f) Floor trap cover found to be dented.	
22	**Terrace** a) Water ponding sighted on floor tiles. b) Cracks sighted at up stand kerb. c) Gap sighted at skirting tiles jointing. d) Pointing sighted at floor tiles jointing. e) Roughness found on wall finishes. f) Wall jointing found to be rough. g) Jointing around sliding door outer frame jointing found to be rough. h) Sliding door outer frame found to be damaged. i) Scratches sighted at sliding door outer frame jointing. j) Sliding door found to be stiff in operation.	**10**
23	**External Works** a) Diagonal cracks sighted on perimeter fencing wall. b) Fencing gate found to be rusty. c) Stain water marks found on perimeter fencing wall. d) Chippings sighted on perimeter fencing wall. e) Damages sighted on perimeter fencing wall. f) Gap sighted at letter box jointing. g) Letter box found to be dented. h) Refuse chamber's door frame found to be rusty. i) Electric meter compartment's door found to be misaligned. j) Jointing at the compartment next to electric meter found to be rough.	**38**

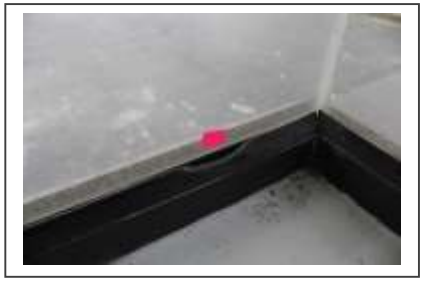
Defects Summary		
No	Defects Description	Total
	k) Diagonal crack sighted on external wall (Front Elevation). l) Diagonal crack sighted on fascia board (Front Elevation). m) Coping finishes found to be stained (Front Elevation). n) Water mark found on coping finishes (Front Elevation). o) Diagonal crack sighted on external wall (Rear Elevation). p) Scratches sighted on external wall (Rear Elevation). q) Patchiness found on external wall (Side Elevation). r) Water mark found on external wall (Side Elevation). **Car Porch** a) Hollowness detected on skirting tiles. b) Floor tiles jointing found to be rough. c) Cracks sighted on drain kerb. d) Cracks sighted at external wall jointing. e) Cracks sighted on external wall. f) External wall found to be hollow. g) Cracks sighted on column. h) Column found to be hollow. i) Paint peeling off, water mark and water dampness found on ceiling finishes. j) Water mark found on beam and ceiling finishes. However, water dampness only been detected on beam finishes.	

Defects Summary		
No	Defects Description	Total
	k) Paint peeling off sighted on ceiling finishes. **Foyer** a) Floor tiles grouting found incomplete. b) Floor tiles found to be hollow. c) Wall found to be hollow. d) Cracks sighted on column. e) Cracks sighted on top of skirting. f) Inconsistent gap sighted at ceiling manhole jointing. g) Door lockset found to be rusty. h) Door hinge found to be rusty. i) Door panel found to be misaligned (door panel not flush with door frame).	

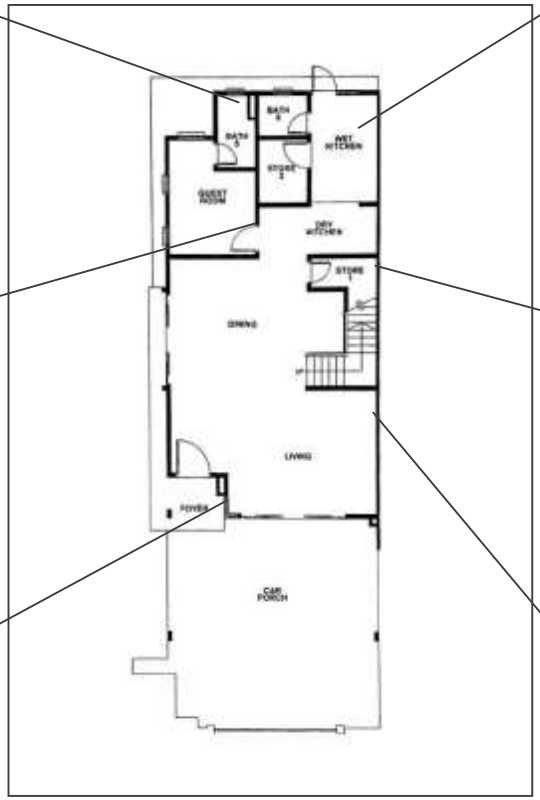
Table 3. 3 : Inspection summary on defects sighted on property

Floor trap cover found dented

Gap sighed between architrave and skirting tiles

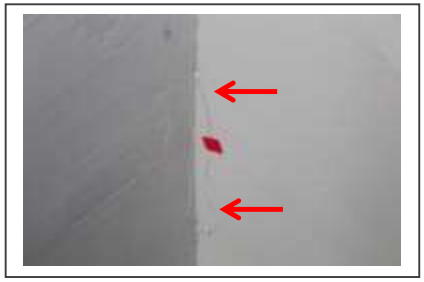


Rubber gasket at glass found not installed properly

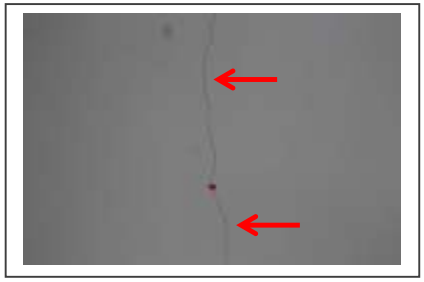


Internal Area Ground Floor

Kitchen sink found



Cracks sighted on wall

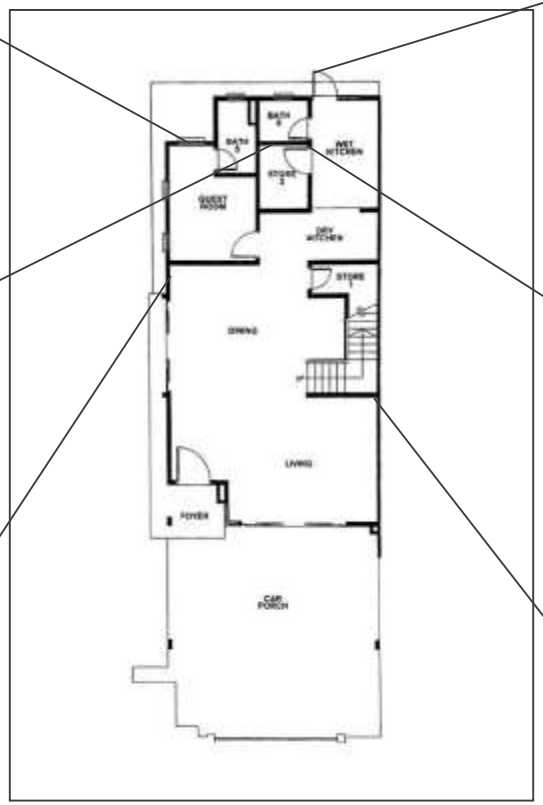


Cracks sighted on wall

Window handle found loosened

Paint dripping sighted on wall

Wall found uneven and exceeded the tolerance of 3mm over 1.2m



Internal Area Ground Floor

Damages sighted on door panel

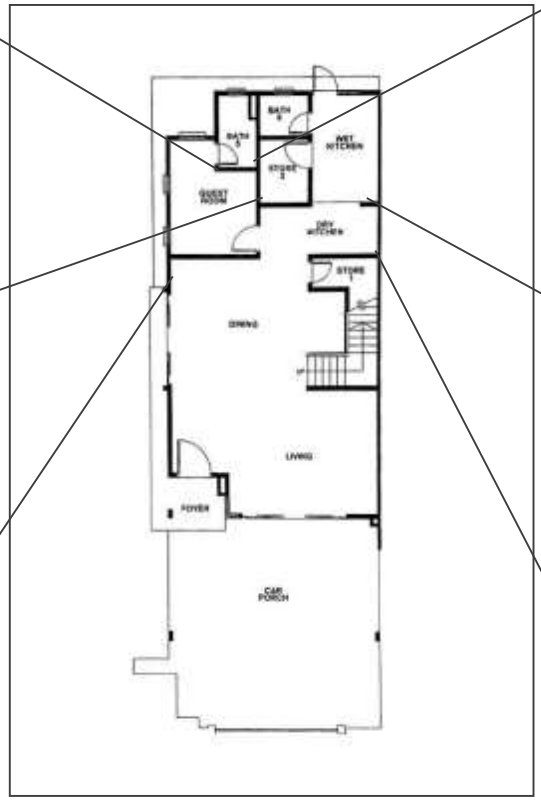
Damage sighted on door

Wall squareness found misaligned and exceeded the tolerance of over 300mm

Chippings sighted on wall

Wall squareness found misaligned and exceeded the tolerance of 4mm over 300mm (more than15.0mm)

Gap sighted at switch buttons



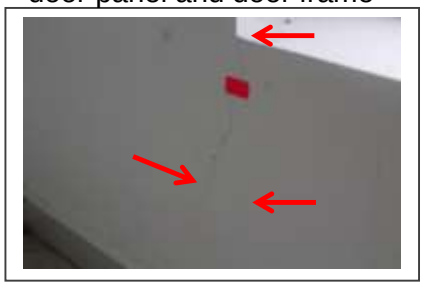
Internal Area Ground Floor

Gap sighted at wash basin

Hollowness found on wall tile

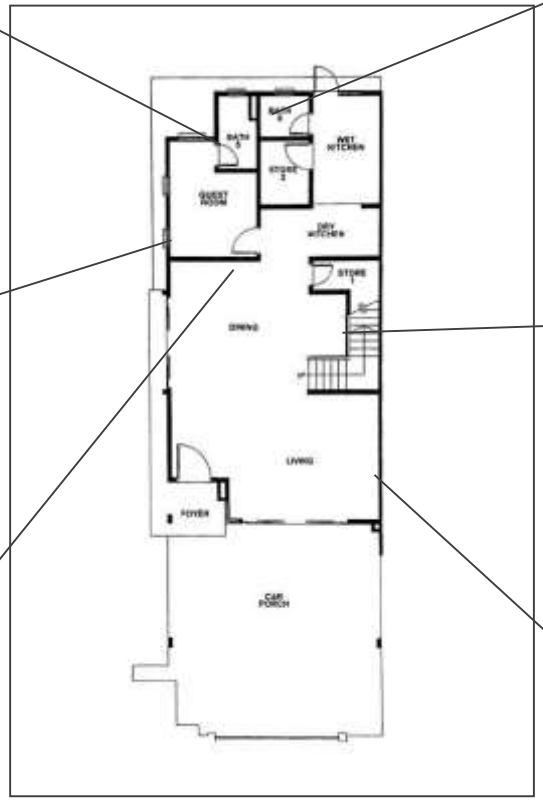
Wall squareness found misaligned and exceeded the tolerance of 4mm over 300mm (approximately 13.9mm)

Inconsistent gap sighted between door panel and door frame



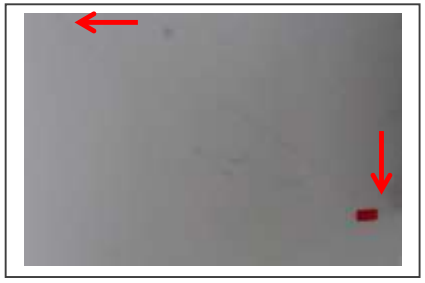
Cracks sighted on wall

Hollowness found on floor tile



Internal Area Ground Floor

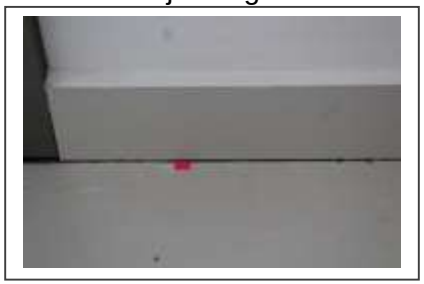
Floor tiles grouting found incomplete



Crack sighted on wall

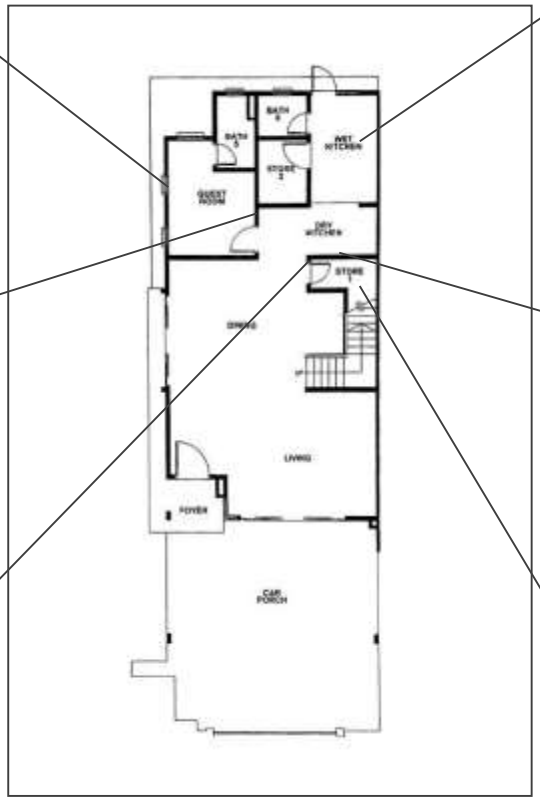
Hollowness found on skirting tile

Gap sighted at window frame jointing



Gap sighted at the bottom of skirting tiles

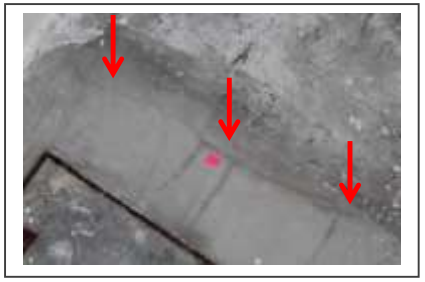
Door frame jointing and door finishing found rough



Internal Area Ground Floor

Kitchen sink found rusty

Hollowness and crack found on wall



Cracks sighted on floor

Floor trap cover found dented (unable to close)

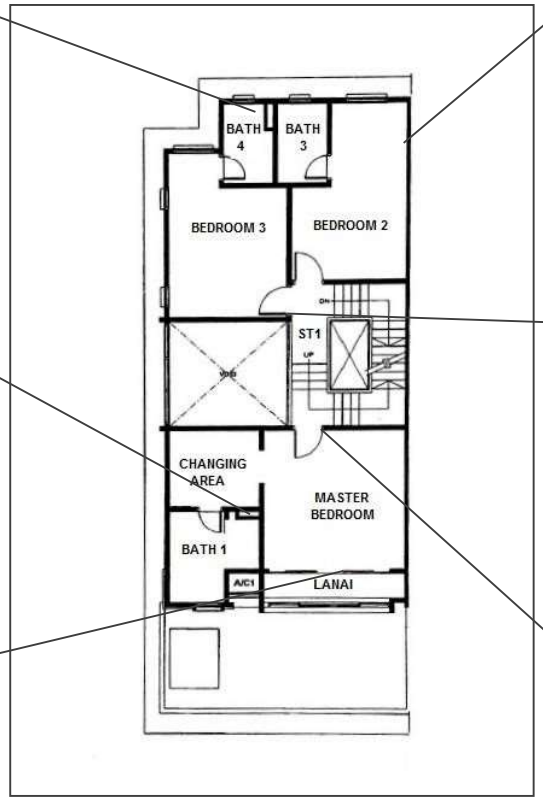
Wall found wavy

Hollowness found on wall tile

Size of door frame found inconsistent

Sliding door frame found dented

Door panel found misaligned

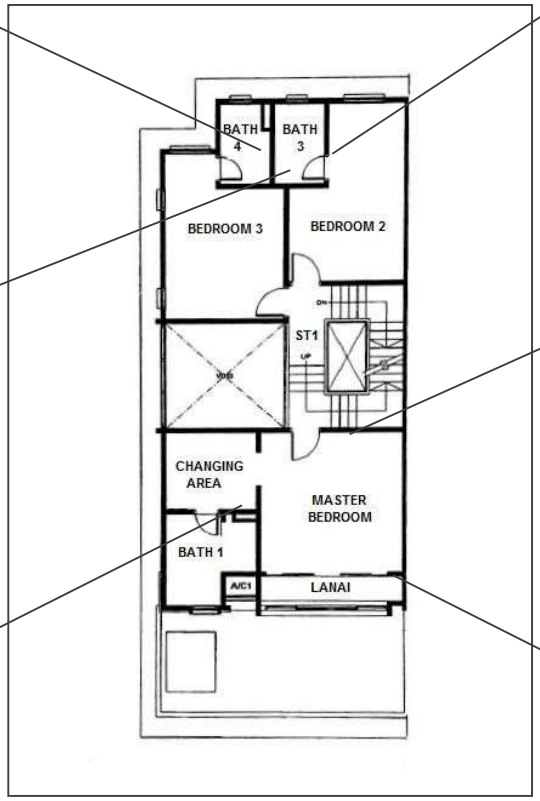


Internal Area First Floor

Bidet jointing found rough

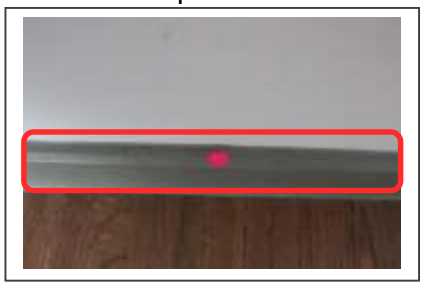
Lower water pressure sighted at wash basin water tap

Paint dripping found on wall



Internal Area First Floor

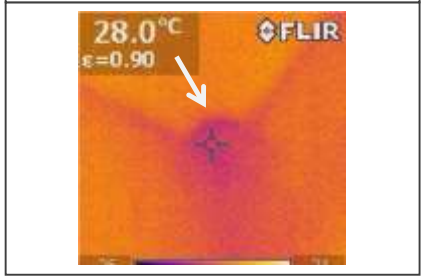
Gap sighted between timber flooring panel



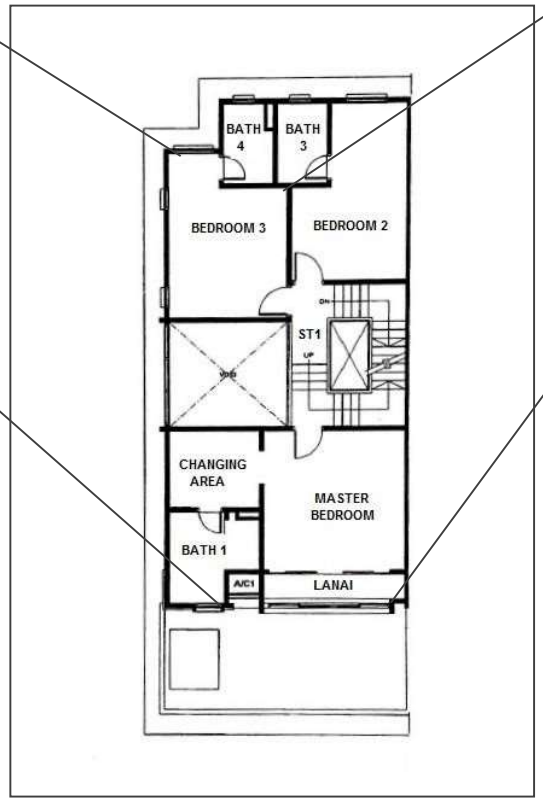
Gap sighted at timber skirting

Crack sighted on wall

Squeaky sound heard in operating the window

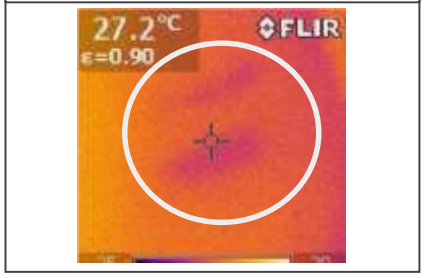


Water dampness detected on ceiling



Internal Area First Floor

Wall squareness found misaligned and exceeded the tolerance of 4mm over 300mm (more than 15.0mm)

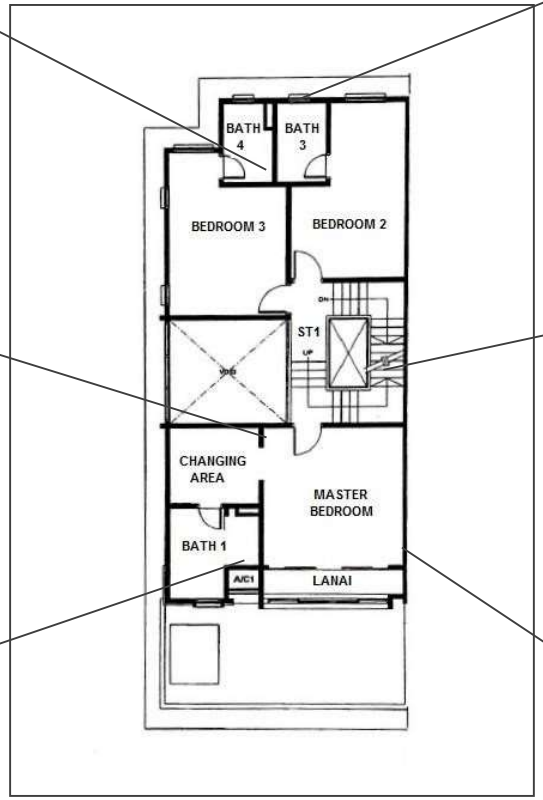


Water dampness detected on wall

Toilet paper holder found misaligned

Wall found uneven and exceeded tolerance of 3mm over 1.2m (approximately 7.7mm)

Chipping sighted on floor tile



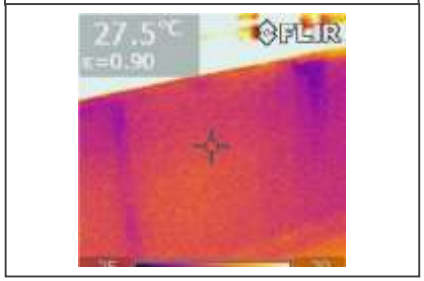
Internal Area First Floor

Hollowness found on wall tiles

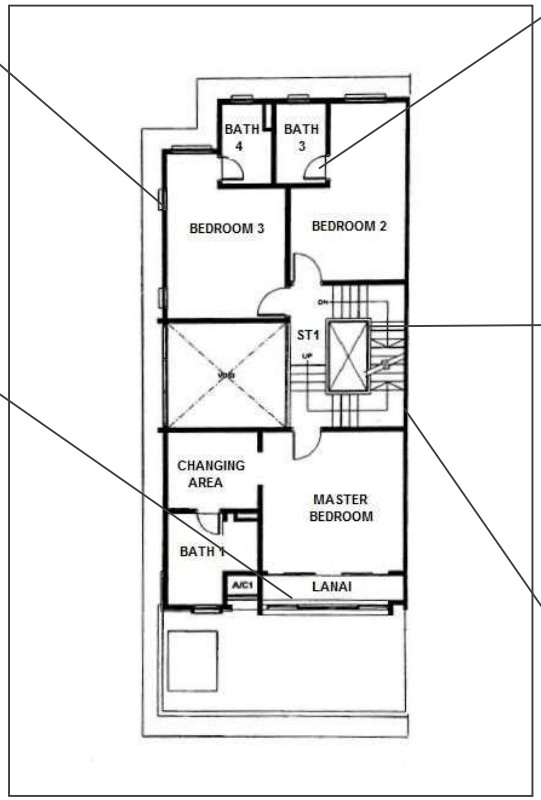
Skim coat at staircase edges found peeled off

Crack sighted on wall

Scratches and blistering found on wall

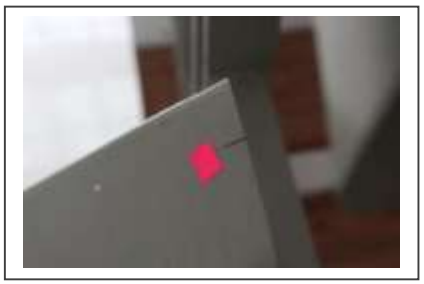


Water dampness detected on wall



Internal Area First Floor

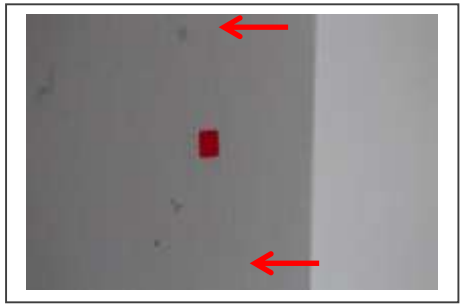
Door found squeaky



Scratches sighted on railing

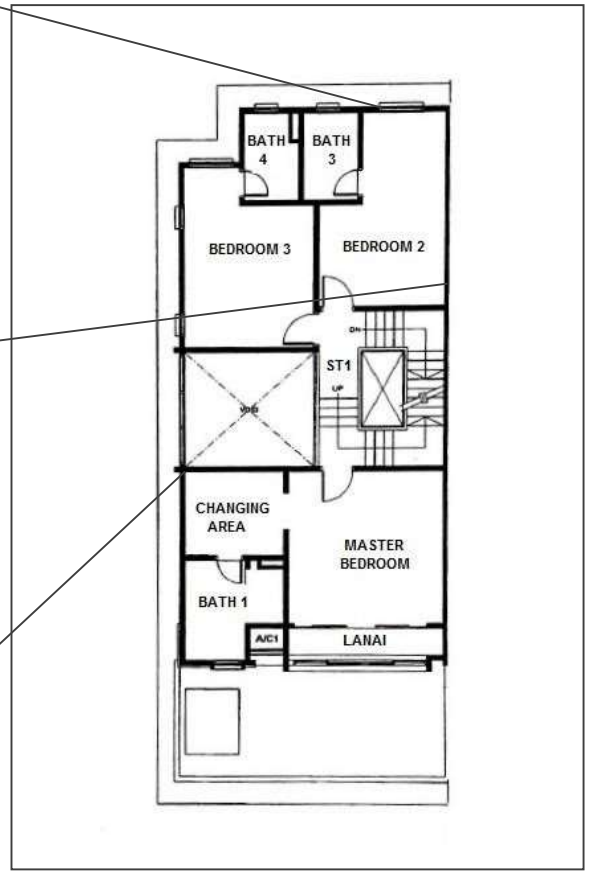
Hollowness found on wall

Window frame found dented



Crack sighted on wall

Gap sighted at timber skirting jointing

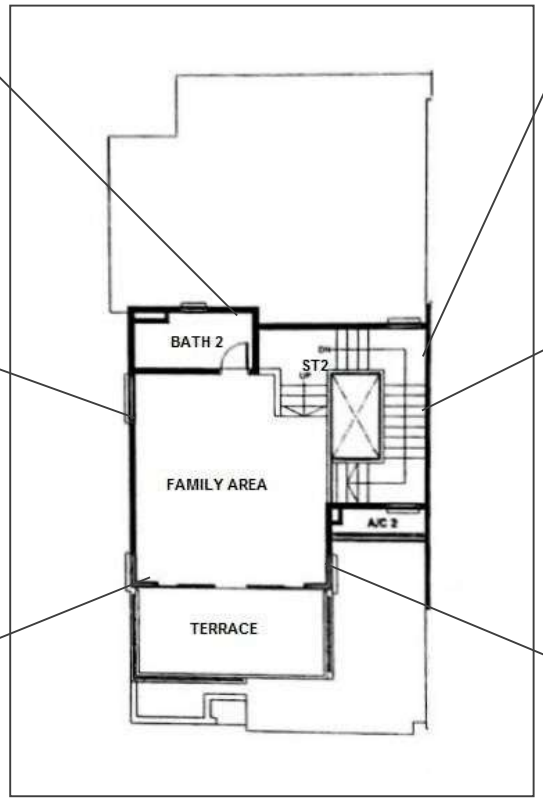


Internal Area First Floor

Wash basin found misaligned

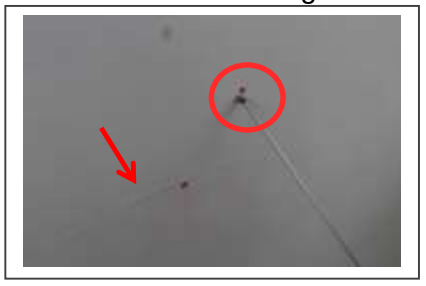
Window hinge found loosened

Damages found on timber skirting

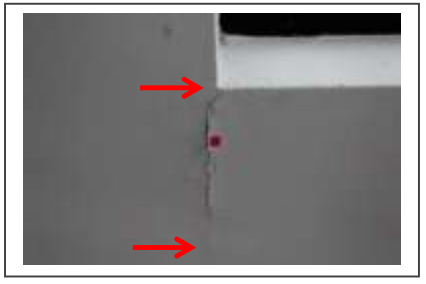


Internal Area Second Floor

Gap sighted at the bottom of timber skirting



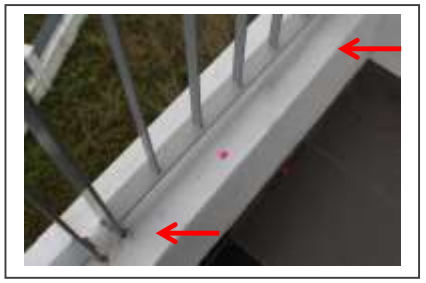
Crack and hollowness found on wall



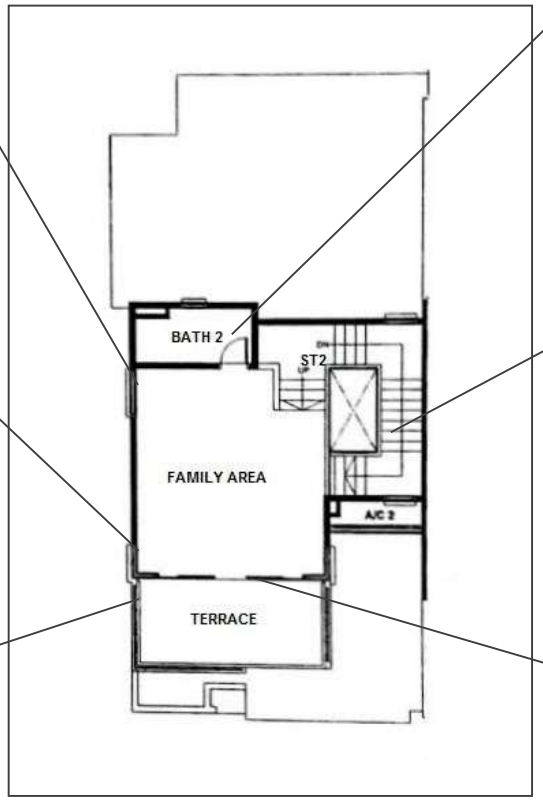
Crack sighted on wall

Blistering and paint peeling off sighted on wall

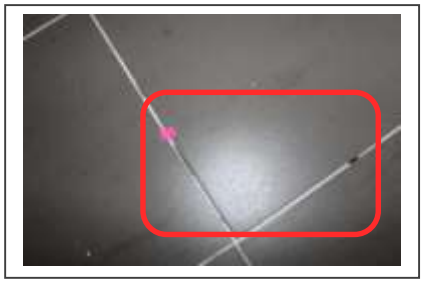
Blistering and crack sighted on wall



Crack sighted on up stand kerb



Internal Area Second Floor



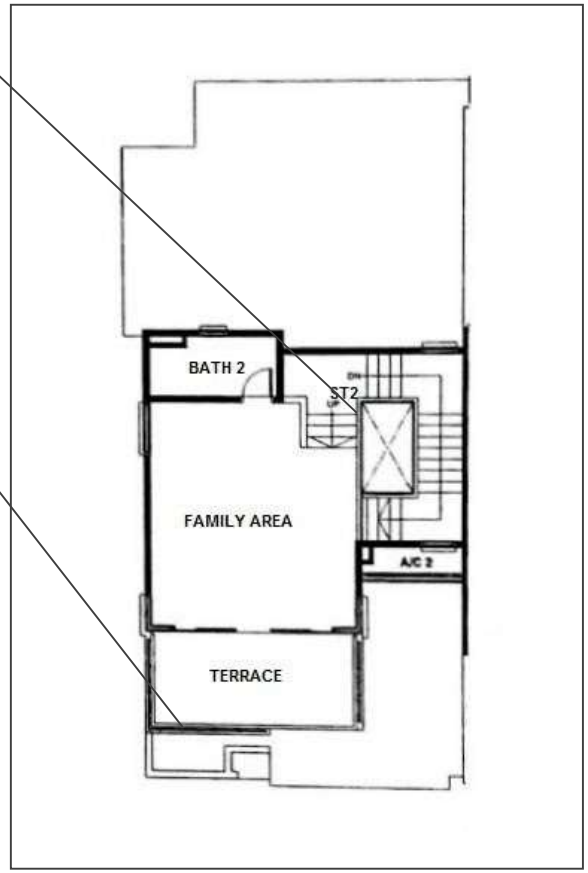
Under grouting found on floor tiles

Skim coat at staircase edges found peeled off

Door outer frame found damaged

Gap sighted at staircase railing jointing

Water ponding found on floor tiles

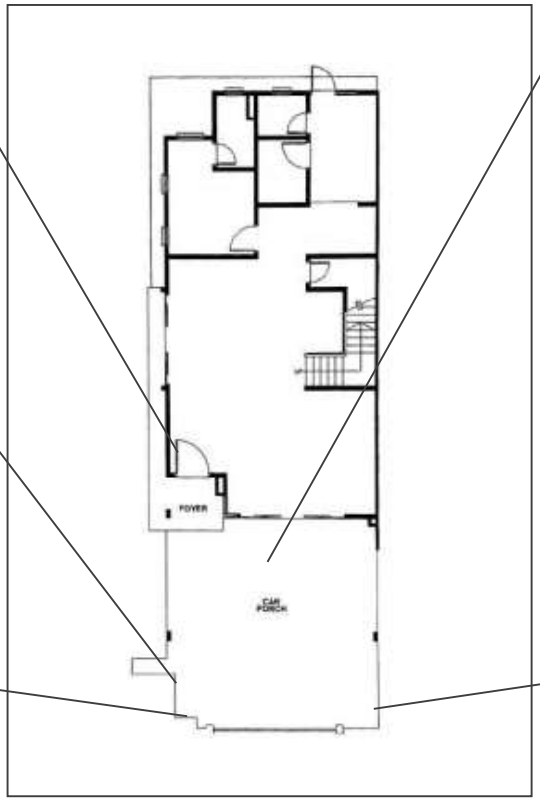


Internal Area Second Floor

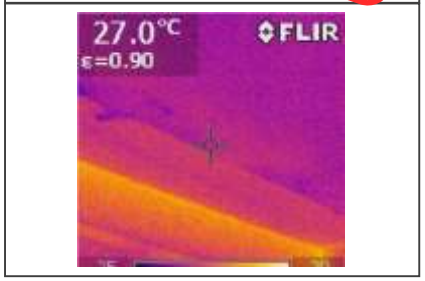
Door lockset found rusty

Refuse chamber's door frame found rusty

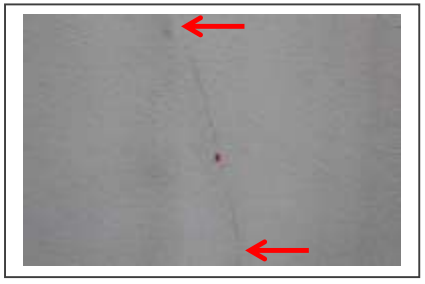
Electrical meter compartment's door found misaligned



External Area Ground Floor



Water dampness detected on ceiling

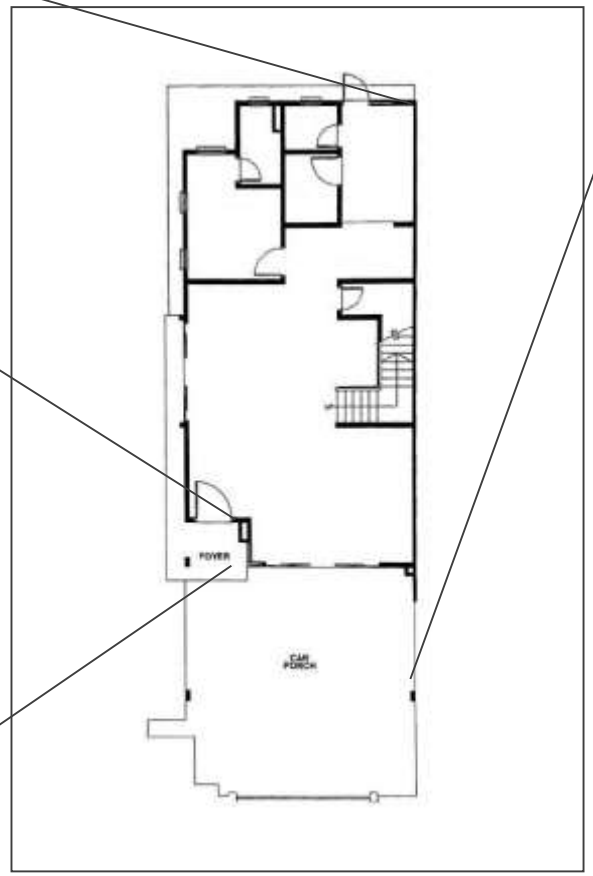


Diagonal crack sighted on perimeter fencing wall

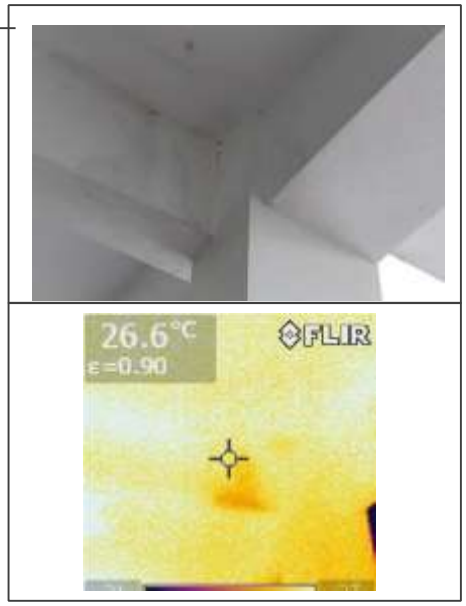
Damages sighted at perimeter fencing wall

Door panel found misaligned (door panel not flush with door frame)

Hollowness found on floor tile



External Area Ground Floor

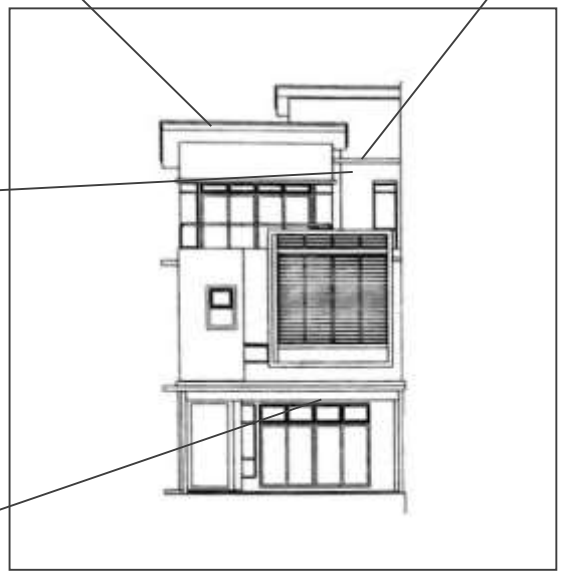


Water dampness detected on beam

Diagonal crack sighted on fascia board

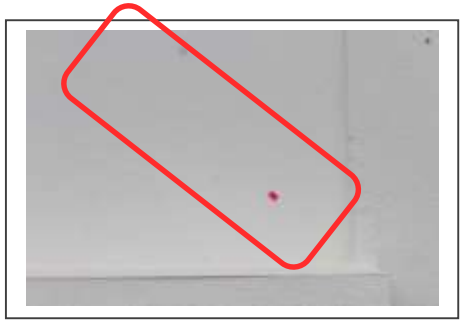
Diagonal crack sighted on external wall

Stain marks sighted on coping

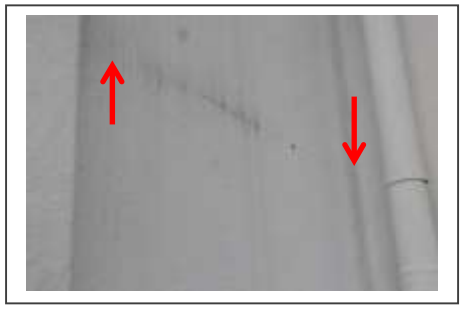


Front Elevation

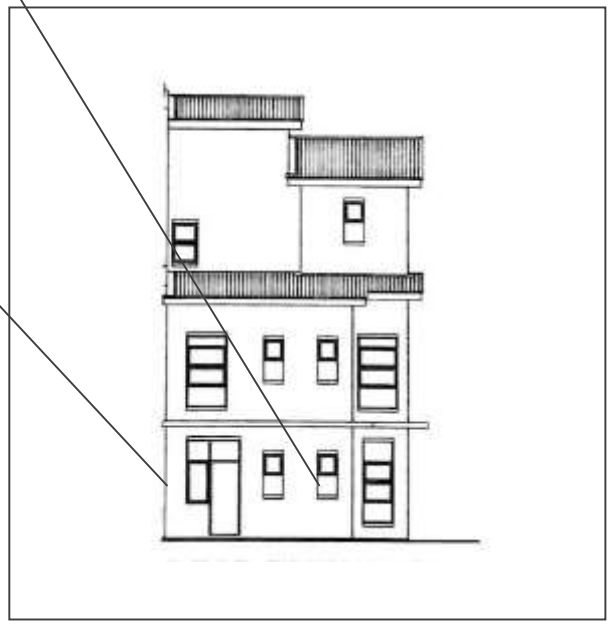
Water mark sighted on coping



Scratches sighted on external wall



Diagonal crack sighted
on external wall

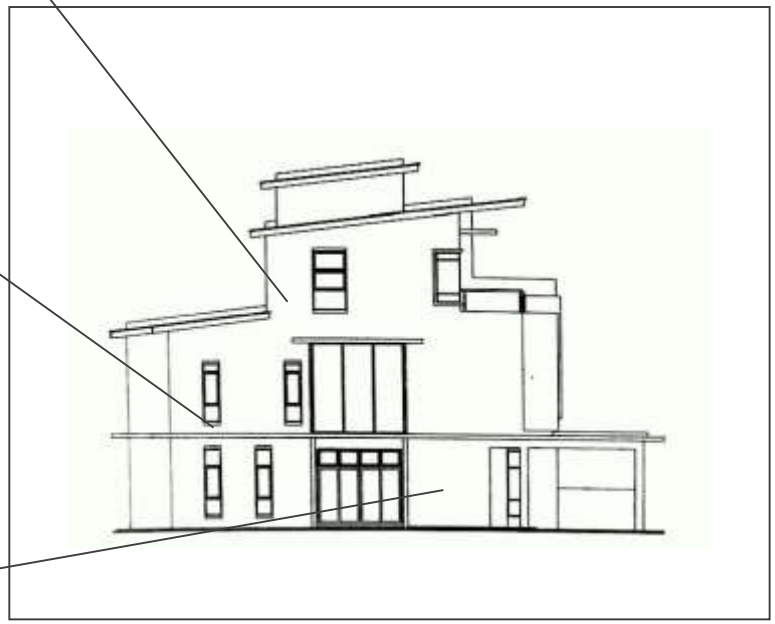


Rear Elevation

Patchiness found on external wall

Water mark sighted on external wall

Patchiness sighted on external wall



Side Elevation

3.4.2 LIMITATION OF INSPECTION

Limitation of Inspection	
No	Limitation
1	No water supply at Bath 5 and unable to check on the functionality of the water tap, WC, bidets and etc.

Table 3. 4 : Limitation of inspection

3.5 SUMMARY

The overall condition of the double storey terrace house of No. 21, Jalan Panglima Awang 35/104, TTDI Alam Impian, Seksyen 35, 40470 Shah Alam, Selangor is poor with the highest defect sighted on the property is found on the element of wall with the percentage of 34.38 %. The type of defects sighted, which is referred to the CIS 7 : 2006, are the the evenness of wall with the tolerance more than 3mm over 1.20m and the right angle of wall with the tolerance more than 4mm over 300mm. Besides, there are visible cracks, brush marks, paint dripping, chipping, hollowness, patchy and rough surface found on wall finishes. The quality of work especially on the finishes of wall and staircase need to be main focus during the rectification work.

CHAPTER 4.0
PROBLEMS AND RECOMMENDATIONS

The content for the Chapter 4 for my Practical Training Report is on the problems and recommendations for the selected topic that I have propose and consult with my supervisor.

We are require to state the problems that we are facing based on the topic for our Practical Training Report which I made up a decision to bring the topic on Building Quality Inspection for Vacant Possession as it is one of the scope of services offered at the company that I am currently interning, Canaan Building Inspection Sdn. Bhd.

In this chapter too, I will elaborate on the recommendation for every problems that I have stated while performing the Building Quality Inspection for Vacant Possession.

4.1 PROBLEMS AND RECOMMENDATIONS

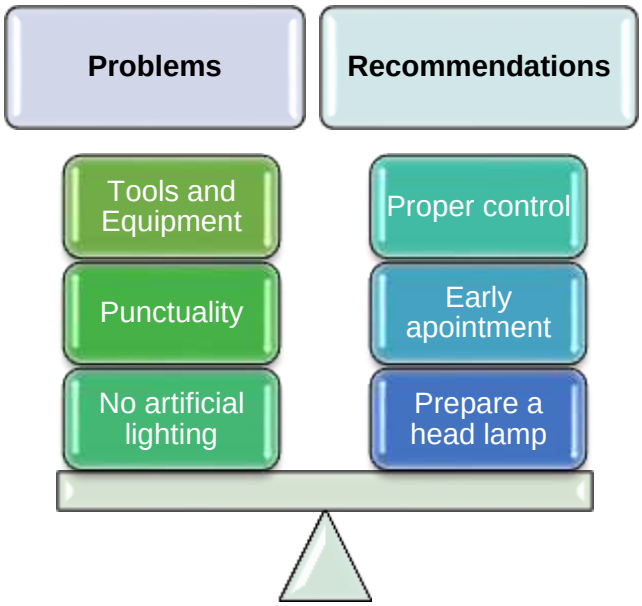


Chart 4. 1 : List of problems and recommendations

1. Ways of Handling the Tools and Equipment

During performing the Building Quality Inspection for Vacant Possession, there are some tools and equipment that been used by the inspector. Thus, some of the tools might cause stain mark or scratch on the element of the property if it is not handle with care.

Sometimes, the inspector might cause a scratch on the floor tiles while checking the hollowness with using the tapping rod that made from steel. Also, the inspector might leaving a stain mark on the wall finishes as after the assessed the evenness and squareness of the element. Spirit level 1.2 metre and L-Square usually will leave the stain mark on the clean surface of wall finishes.

As for the recommendation, the inspector in charge on the Building Quality Inspection for Vacant Possession must handle the tools and equipment with proper care without causing any new defects on the vacant property.

2. Punctuality for the Appointment

The next problem faced while performing the Building Quality Inspection for Vacant Possession is the punctuality for the appointment. Normally the inspector will set the appointment with the client in the morning which is approximately 9.30 am. This is due to some client are just not as punctual as the appointment is set and will affect the time of inspection to be finish.

Thus, to prevent from the time of inspection to be finish been drag until lunch hour, the inspector will set the appointment at 9.30 am. As if the client is late, the inspection would not be drag until the lunch hour since the appointment is set early.

Normally, the Building Quality Inspection for Vacant Possession will take 4 hours for double storey terrace house and 2 to 3 hours for condominium. However, the period is variable as the condition of the property and the square feet of the property.

3. Limitation Due to Unsupportable Lighting

Some of the property is not supported with the artificial lighting since it is not vacant by the owner. Thus, it will cause some trouble for the inspector to properly inspect the condition and quality of every element in the property with details. This problem may only occur for some close space in the property such as toilet and store room.

However, to ensure the problem is solves so that all the space is inspected in details by the inspector, there will be an additional on the equipment to be used during the inspection. The inspector is required to bring along the head lamp during conducting the inspection.

CHAPTER 5.0

CONCLUSION

5.1 CONCLUSION

The content for the Chapter 5 for my Practical Training Report is on the conclusion for the overall lesson that I have learned during my practical session at Canaan Building Inspection Sdn. Bhd.

My practical training is starting from 1st March 2018 until 29th June 2018. During the practical training session, there is new knowledge that I learned from Canaan Building Inspection Sdn. Bhd on the dilapidation survey and also building quality inspection for vacant possession and pre-purchase.

While being a trainee at Canaan Building Inspection Sdn. Bhd, I have been exposed to an outdoor and indoor scope of work which preparing the building plan of the inspected unit of building, preparing the dilapidation survey report, performing the dilapidation survey report and performing the building quality inspection (Qlassic).

However, I finally choose to prepare a report on Building Quality Inspection for Vacant Possession due to my deep interest to learn more on the way Qlassic is implement while performing the inspection on the new property with the guidance from the staff of Canaan Building Inspection Sdn. Bhd and also the staff training given by the director, Sr. Joshua Kang Wee Leng.

REFERENCES

6.1 REFERENCES

1. Book Sources

i. Construction Industry Development Board Malaysia (CIDB). (2006). Construction Industry Standard : Quality Assessment System for Building Construction Work.

ii. Construction Industry Development Board Malaysia (CIDB). (2017). Quality Guidebook for Homeowners.

iii. Construction Industry Development Board Malaysia (CIDB) & Sime Darby Properties. (2014). Sharing of Good Practices Towards Achieving High Qlassic Score.

2. Human Sources / Interview

i. Sr. Joshua Kang Wee Leng. Director Canaan Building Inspection Sdn. Bhd.

ii. Miss Khalilah binti Naim. Building Coordinator Canaan Building Inspection Sdn. Bhd.

iii. Mr. Muhammad Amin bin Mohd Ariffin. Assistant Building Surveyor Canaan Building Inspection Sdn. Bhd.

iv. Mr. Mohamed Shahidam bin Fauzi. Assistant Building Surveyor Canaan Building Inspection Sdn. Bhd.

v. Mr. Shazman Amirul. Assistant Building Surveyor Canaan Building Inspection Sdn. Bhd.

3. Internet Sources / Websites

i. www.cidb.gov.my

ii. http://www.canaanbuildinginspector.com/

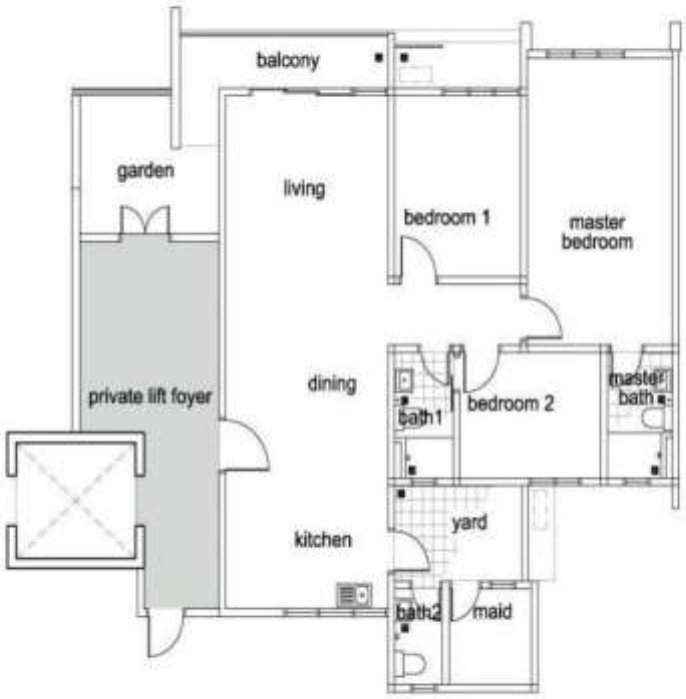
iii. https://idid.facebook.com/StarProperty.my/videos/10155286201896455/

iv. http://www.theedgemarkets.com/article/how-perform-inspection-new-house

APPENDICES

Example of Checklist for Building Quality Inspection

Date: Time Start:
Weather: Time End:



Location:

1		21	
2		22	
3		23	
4		24	
5		25	
6		26	
7		27	
8		28	
9		29	
10		30	
11		31	
12		32	
13		33	
14		34	
15		35	

ELEMENTS		DEFECTS
FLOOR WALL	Finishing Alignment/Evenness Cracks/Damages Hollowness Jointing	Alignment Chipped Crack Dented Lipping
CEILING	Finishing Alignment/Evenness Cracks/Damages Roughness/Patchiness Jointing	Functionality Rough Hollow Inconsistent Jagged
DOOR WINDOW FIXTURE M & E	Joint/Gap Alignment/Evenness Material/Damages Functionality/Safety Accessories Defects	Damage Leaking Missing Noise Overpainted Patchy Stiff Operation Rusty Stain Tonality Uneven Loosen Wavy Scratches Painting Incomplete