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

**INTEGRATED FINAL PROJECT (BSR330)**

**CASE STUDY:**

**Menara Kerja Raya(MKR)**

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**DIPLOMA IN BUILDING SURVEYING**

**SEMESTER  
SEPTEMBER 2018 – JANUARY 2019**



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**BSR330 - INTEGRATED FINAL PROJECT**

I am hereby pronounced this  
Intergrated Final Project Report is fully recommended for revision purpose  
as the originality and its prospect is being accredited by the departments  
through my supervision

Supervised by:

.....  
SR DR ALIA ABDULAH SALEH  
(JANUARY 2019)

## **ACKNOWLEDGEMENT**

We would like to take this opportunity to thank each and everyone who had help us along the way to complete the integrated final project. First, we would like to thank our supervisor, Madam Dr.Alia for the continuous supports and important advice that she personally gave us during the every critique session of each chapter. We would also like to thank our friends and families for helping us in many ways to complete the final project as without them, it would hard for us. Not to forget other lecturer that willingly help us which is Sir Zahir, the teachings that he personally gave was very indeed useful to our assignment especially on the topic maintenance organization.

Apart from that, we are grateful for this subject which taught us in many things from the process of gathering data to improving our soft skill because this is very important for us as the student of final semester whereas we will step into the real working situation during our practical by next semester. Not to forget, our lecturer, Sir Faisal that gave us lecture on every week based on the chapter within the project until the final chapter of the assignment.

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## **ABSTRACT**

The 'Menara Kerja Raya' are located at Jalan Sultan Salahuddin, 50580 Kuala Lumpur with total of 37 floor level. It is a cooperate office which served as the headquarter of the Ministry of works of Malaysia. The tower were built starting from 1<sup>st</sup> December 2009 and completed on 28<sup>th</sup> March 2012 with various parties involve during process of completing the tower such as the GDP Architect, ARUP consultant, Metropolis design consultant, IEN consultant and ZETTA consultant. With the total RM 309,374,000.00 as the built up cost, the tower were built up to 168m in height provided with GFA of 52 271 square metre. Facilities provided within the MKR consisted from Surau and cafe at level 3 while there is pantry at every floor level at the office area. The company in charge for maintaining the tower is the KCJ engineering company whereas they first operate at the property in November 2016 and each systems of the building such as Building management system, elevator, landscaping and cleaning are handled by an out-source company with contract.

Maintenance programme were prepared to carry out it's maintenance work for each of the system especially in cold water supply, fire fighting, GBI component, BMS, plant system as well as electrical system. The concept of the MKR is the diamond glass which the tower are installed high performance envelope which is meant to reduce heat transfer. MKR is a certified green building index with the rating of platinum equipped with GBI components consisted of rain water harvesting, grey water recycling, solar panel, intelligent lighting control, and building management system. The other factors that contributed to the rating of the MKR are the sustainable material used, site planning and management, waste management, recycle material and others but the highest assessment that contributed to the GBI rating is the Energy efficiency(EE) with total point of 35 out of 90. The Building Management system are installed at the MKR with purpose of monitoring and controlling the lighting control, fire protection, lift and MSB system. In buiding condition assessment, inspection does cover entirely on the building because of limitation on access of every floor.

There are total of 21 defect found during the inspection and rating of the building based on the defect recorded does not represent entirely and need to be justify. The type of defect found consisted of mould growth, crack, stain mark, peeling of paint, rusting, and missing. On the maintenance planning, there are systems involved in short, medium and long term based on the maintenance programme provided access for maintenance are either at normal office hour and direct maintenance work which is the emergency repair for example leaking of pipe at the Male toilet.

The only tenant in MKR is at the cafe where there are cafe B and A, each cafe are provided with three lot. In terms of contract service, the Hitachi elevator are under comprehensive maintenance where the 16 lift installed at the tower are fully maintained by the service provider with monthly payment according to the contract agreed from both parties. With inspection